Recovery 101:

Providing Peer-to-Peer Support to Students in Recovery

by

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ABSTRACT

Collegiate recovery programs (CRPs) are university-sanctioned initiatives for students in recovery from alcohol and other drug addiction. Given the ever-rising rates of alcohol and opioid use and misuse, a great need exists to understand how to provide support for those who are considering recovery or who choose a recovery lifestyle in college. The purpose of this action research study was to examine peer-to-peer support for students in recovery. The development of two training innovations, Recovery 101 and Recovery Ally, were delivered to health and wellness peer educators called the Well Devil Ambassadors (WDAs) with the goal of equipping them to better support their peers in recovery. Learning objectives for the training were to gain knowledge about addiction and recovery and to enhance positive attitudes toward students in recovery, which could thereby increase self-efficacy and behavior intention to work with their peers in recovery. Mindfulness was included in the trainings to enhance the WDAs' experience and provide tools for a self-care skillset. Quantitative data included pre, post, and follow-up surveys for the Recovery 101 training. Qualitative data included short-answer questions following Recovery 101 training and in-depth interviews following Recovery Ally training. Findings indicated that the information provided in Recovery 101 built the WDAs' knowledge on the topics of addiction and recovery; hearing multiple perspectives from students in recovery allowed the WDAs to increase empathy toward students in recovery; and the building of knowledge, empathy, and mindfulness allowed the WDAs to gain self-efficacy and behavior intention when supporting their peers in recovery.

DEDICATION

For my Mother

I am me

because of you.

ACKNOWLEDGMENTS

It is not by chance that my dissertation committee is made up of three strong, tenacious, and kind women. I believe women should uplift one another to attain their full potential—and when that potential has been realized, to propel them to reach for more. I am grateful to have such forces in my life.

Dr. Danah Henriksen, my Chair, you are the reason I completed this dissertation with my sanity intact. Since I began this program, you have provided inspiration, direction, and unwavering support. I could not have accomplished this milestone without you.

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The women in my life are extraordinary, yet there is one man who deserves an award for holding me throughout the duration of this program, and always. My husband, Michael Gueci, to say that you encourage me is putting it mildly. It is through your eyes that I find my strength. I have come alive because of you.

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CHAPTER 1

INTRODUCTION AND PROBLEM OF PRACTICE

Students in recovery from addiction are brave people who resist against their darkness and make a choice every day to make a healthier choice . . . I would like to learn how to better assist students in recovery, when I do not have experience with drugs and alcohol.

– Well Devil Ambassador, Spring 2016

This dissertation research investigates social support for college students in recovery from alcohol and other drug addiction. Peer-to-peer interventions have been proven as a best practice in relaying health information within the college-age population (Hunter, 2004; White, Park, Israel, & Cordero, 2009). At Arizona State University (ASU), the most well-established group of student health educators employed by the university are known as the Well Devil Ambassadors (WDAs). These peer educators are responsible for providing education and programming about a variety of health-related topics to support their fellow students as they navigate the college environment.

The subject of this dissertation is the creation, development, and research of two training interventions (Recovery 101 and Recovery Ally) for the WDAs with a goal to build their knowledge and skills on how to best support students in recovery from alcohol and other drug addiction within the university environment. Chapter 1 provides the motivation, as well as gaps in research, that led to the development of this innovation and the related inquiry around it. This chapter outlines national, local, and grassroots efforts as responses to the drug epidemic, specifically from 2015-2017. As college students are a population with unique needs, risk and protective factors influencing health are described. Then, a brief history of collegiate recovery programs (CRPs) is discussed. Researcher positionality, situational context, and relevant college health data are then

reviewed. Last, the previous cycles of action research I carried out are outlined to provide the reader with context that led to the final innovation I implemented and studied to complete this dissertation research.

As such, Chapter 2 provides the reader with an overview of the overarching philosophy of mindfulness and the theoretical perspectives of self-efficacy and planned behavior that are used to frame and ground the training intervention and resulting methodology. Chapter 3 describes the mixed-methods action research approach to data collection. Chapter 4 references the data analysis process and results of the research, while Chapter 5 discusses the interpretation of the data, research limitations, and future recommendations.

Introduction

National, local, and grassroots alcohol and other drug prevention services were held in a prominent light during former President Barack Obama's tenure. The 2015 National Drug Control Policy placed an emphasis on increased prevention and treatment of substance use and abuse and on enhanced support services for addiction recovery. Federal and local funding was made available through grants to community organizations, treatment centers, and universities.

In Arizona, the three public land-grant institutions that received such government funding were The University of Arizona, Northern Arizona University, and Arizona State University. These universities were charged with developing CRPs on their individual campuses to support students in recovery from alcohol and other drug addiction.

College campuses have long been perceived as environments that are ripe for substance use and abuse; however, there exists a population of students who are in

recovery from addiction. This perception of an unsupportive environment on campus can be detrimental to student recovery. When students do not feel supported in their social, academic, or personal lives, they have difficulty persisting and thriving in college (Nicpon et al., 2007; Solberg & Viliarreal, 2016). For students in recovery, additional support in the form of abstinence and recovery maintenance is necessary as well. Collegiate recovery programs are aimed at facilitating a culture of social engagement and support, which can go a long way in sustaining individual and community well-being for students in recovery.

While different models for CRPs exist based on the needs of students and resources available through the university, research studies on CRPs have largely focused on a residential model and have investigated the students residing in sober housing (Laudet, Harris, Kimball, Winters, & Moberg, 2014; Steiker & Alexander, 2014; Terrion, 2012). Research of the residential CRP model often focuses on interventions solely within residential sober housing. Such researchers have investigated students in recovery as separate from the larger college community, focusing on student response to services within the residential unit and not reviewing support outside of their living situation (e.g., support services in the university). As such, there is an unfulfilled need to address what the university overall can do to support students in recovery and how CRPs can function to facilitate that support. Thus, support must come not only from other students in recovery, but also from others in the university community who are not in recovery. If students in recovery are to adapt and function in the world around them, then they need support and understanding from the rest of the (nonrecovery) community. For this action research study, I developed an intervention to build social and individual levels of

support for students in recovery by providing education and training for peer educators from the university community to better serve students in recovery. I conducted research to better understand the outcomes of this intervention. In the next sections, I provide context to understand issues in the larger discourse that contribute to the challenges of students in recovery and that led the path toward local this intervention at ASU.

National Context

The need for recovery support services has never been higher. Nationally, total drug overdose rates have increased 211% since 1999 (Centers for Disease Control and Prevention [CDC], 2017). From 1999 to 2015, prescriptions for opioid medication quadrupled, leading to six out of 10 drug overdose deaths involving opioids (CDC, 2017). Deaths from prescription painkillers have become a national epidemic, with 33,091 people dying from opioid use and misuse in 2015 (CDC, 2017). Alcohol use and misuse continues to be a leading cause of morbidity and mortality in the United States. Alcohol misuse accounts for one in 10 deaths in 20- to 64-year-old working adults, responsible for 88,000 deaths from 2006-2010 (CDC, 2014). Additional information specific to college students at ASU will be presented in the section titled "American College Health Association – National College Health Assessment."

Addiction prevention and recovery support services were granted a national spotlight by former President Barack Obama's Administration. In 2014, President Obama released the revised 2015 National Drug Control Policy (Office of Drug Control Policy, 2015). The former Director of the National Drug Control Policy, Michael P. Botticelli, served as the nation's "Drug Czar," leading national efforts toward improved drug control. A recovering addict himself, Botticelli brought a more compassionate stance to

drug prevention efforts. The goals of the national policy were to prioritize and address the issues of substance abuse disorder through de-stigmatization, enhanced medical services, support services for recovery to nonviolent drug offenders rather than the traditional criminal justice approach, and enhanced efforts at prevention of first alcohol and other drug use (Office of Drug Control Policy, 2014).

As the drug epidemic spotlight moved out of low socioeconomic neighborhoods and into suburban homes and college campuses, policy change shifted from strict jail time to a softer approach to drug rehabilitation, where "punishment is out and compassion is in" (Seelye, 2015, p. 9). Addiction prevention and education was emerging as a critical issue at the national and state level. Documentaries, radio talk shows, and regional task forces have all shed light on the growing drug epidemic (Cadeau, 2016; Logan, 2017; National League of Cities & National Association of Counties, 2016; U.S. Department of Health and Human Services [HHS], 2016; Wydale, 2016).

While there have been moves made nationally and statewide to deal with drug policy, prevention, and recovery support, there are specific concerns for the college-age student population. As college students are in a unique stage of development, both psychologically and emotionally, programs that focus on drug or alcohol interventions must be developed with this population's particular needs in mind. Risk and protective factors for college students, as related to alcohol and other drug use, will be presented in the following section.

Risk and Protective Factors for College Students

The college-age population is unique from the adult population at large, especially as related to alcohol and other drugs. Research has shown that college students experience lower levels of psychological well-being due to low levels of mindfulness, which, according to Kabat-Zinn (1990), refers to being fully present in the moment, and low levels of self-efficacy and self-compassion (Soysa & Wilcomb, 2015). Self-efficacy refers to the confidence an individual perceives themselves to have in accomplishing tasks (Bandura, 1977), while self-compassion refers to the kindness an individual feels toward themselves (Soysa & Wilcomb, 2015).

Developmental models may help explain why some students have a greater or lesser propensity for psychological distress and adverse health outcomes in college. One such model is the overload model, which describes how many developmental transitions (i.e., unfamiliar environment, new friendships, challenging coursework) experienced all at once can lead to stress. Some students may be at an increased health risk in college due to peer influence or environmental factors and may turn to alcohol or other drugs to cope with stress (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2002; Schulenberg & Maggs, 2002).

Late teenage years and early adulthood is a time some individuals perceive to be their “drinking years” (Schulenberg & Maggs, 2002). Relationships (with family, friends, school personnel) and daily environments (home, school, friends’ houses) play a role in how teenage and young adults develop stress coping responses and, in turn, affect their perception of and relationship to alcohol and other drugs. These developmental networks influence drinking or nondrinking patterns. Generally, these social and familial

relationships and environments provide support and context to the growing individual. Transitions (e.g., the move from family home) affect individuals to greater or lesser degrees (Schulenberg & Maggs, 2002). The transition from high school to college is one such stressor that can lead to the development of unhealthy methods of coping, such as alcohol use.

Healthy Structures for Students in Recovery

Adaptation between one system and another is an important factor in this transition. Risk factors (e.g., genetic predisposition to substance abuse) and protective factors (e.g., strong social support networks) are key to note here as well. Healthy family structure and connection can provide a protective barrier against the risk of peer pressure and influence. Development of a mindfulness practice, or a method of being fully present in the moment and aware of emotions as they arise, can serve as a predictor of self-efficacy and self-compassion, and thereby, a safeguard against psychological distress (Soysa & Wilcomb, 2015). Mindfulness practice has been shown to reduce stress, depression, and anxiety, which are indicators of psychological distress (Kabat-Zinn, 1990). The effect of the transition from high school to college is seen as a determination point where students pick up healthy or unhealthy behaviors and habits that continue on to their adult years. In this way, college is a huge determinant of health and wellness (Schulenberg & Maggs, 2002).

Research has indicated the effectiveness of peer education for college students as a primary prevention strategy to prevent risk on multiple health and wellness topics, from alcohol (Hunter, 2004; White et al., 2009) to sexual assault (Anderson & Whiston, 2005; Cupples, Zukoski, & Dierwechter, 2010; Jozkowski, Henry, & Sturm, 2014; Lonsway et

al., 1998). Communication about health is well received by college students when peers design and deliver the curriculum, especially if interventions are over a significant length of time—for example, over the course of several months versus a one-time session (Anderson & Whiston, 2005). Peer-to-peer education can provide effective techniques to deliver information to college students, which is a design feature of the intervention focus in this study.

At ASU, peer-to-peer engagement is a widely used method of providing student support. Groups of students are hired to be peer educators within departments, such as ASU Wellness, ASU Housing, and ASU Counseling. Once hired, peer educators are trained in the department's area of expertise—for example, peer educators within ASU Counseling are trained in compassionate listening skills. The responsibilities of peer educator employment include acting as role models of healthy living, planning and promoting events, and being available to engage with and provide resources for other students.

The peer educators within ASU Wellness are called the Well Devil Ambassadors (WDAs). The WDAs are undergraduate students who receive free housing in exchange for a 15-hour work week. To be selected as a WDA, students need to be in good academic standing and participate in a mandatory 40-hour training on health and wellness topics. The majority of the 40-hour training is provided by staff at ASU Wellness, the department for which the WDAs work. However, staff from other departments are often called in to train the WDAs in their areas of expertise; for example, the Sexual Violence Prevention Team trains the WDAs in violence education and prevention.

As an ASU staff member who was engaged in recovery support and engagement efforts, I conducted a portion of the 40-hour WDA training. The first training intervention created for this dissertation (Recovery 101) took up a 2-hour block of WDA mandatory training. Participation in the second training intervention created for this dissertation (Recovery Ally) was voluntary for several self-selected WDAs. Participation in Recovery 101 and Recovery Ally was intended to build WDAs' knowledge, attitudes, behavior intentions, and self-efficacy as related to supporting students in recovery from addiction, allowing them to better serve as "ambassadors" of wellness for this population. Details on the interventions are described in Chapter 3.

Collegiate Recovery Programs

Collegiate recovery programs were specifically developed for the college-age population and trace back to 1977 at Brown University in Rhode Island, when a professor in recovery began supporting students who were struggling with substance use issues by helping them find resources and Alcoholics Anonymous (AA) 12-step meetings (Greenagel, 2016). Rutgers University in New Jersey built on this trend in 1988, when housing was built specifically for students in recovery; Texas Tech University established the Center for the Study of Addictions in 1986; and Augsburg College in Minnesota built the StepUP Program for students in recovery in 1997 (Collegiate Recovery Movement, n.d.; Greenagel, 2016).

Within the university environment, CRPs provide social support as a prevention strategy to relapse (Smock, Baker, Harris, & D'Sauza, 2011). The challenges encountered in residence halls can be unique to the student population, who are generally younger and

do not have families to support. As such, the difficulties of becoming alcohol- and drug-free and maintaining sobriety are different for a college student than for an older adult.

Students who join CRPs note that their participation serves as a protective barrier between themselves and the "abstinence hostile" university environment (Cleveland, Harris, Baker, Herbert, & Dean, 2007). For these students, CRPs provide a valuable method to finding a like-minded community of their peers in the college campus space where they feel otherwise alienated. The "instant friendships" formed within the context of the CRP community protect students in recovery from isolation, which is linked to risk of relapse (Bell et al., 2009).

Twelve-step meetings, such as AA, are often one of the mainstays of CRPs. Participants of AA express experiencing a sense of fellowship to people who share the similar stories of addiction, a supportive community, and "divine connection to grace," described as feelings of gratitude, acceptance, and love from a higher power—in other words, spirituality (Glerup, 2016). Mindfulness and meditation practice has been proven to be a significant complementary coping skill in upholding one's recovery from addiction (Bowen, 2012; Garland, Manusov, et al., 2014; Garland, Roberts-Lewis, Kelley, Tronnier, & Hanley, 2014; Pruett, 2007; Turner, Welches, & Conti, 2014; Witkiewitz, 2014). Spiritual practice, community, mindfulness, and group acceptance aid and help sustain recovery, as expressed by those who participate in support programs such as clinical therapy, AA, and CRPs.

Collegiate recovery programs provide support and advocacy to students in recovery from alcohol and other drug addiction. The task of tackling addiction and providing supportive structures is a massive undertaking within the larger environment of

a national drug epidemic (Cadeau, 2016; HHS, 2016; Logan, 2017; National League of Cities & National Association of Counties, 2016; Wydale, 2016). While studies have examined the student in recovery experience of a CRP (Cleveland et al., 2007; Laudet et al., 2014; Smock et al., 2011; Worfler, 2016), there is currently a dearth of research that examines how CRPs work in the larger university environment to develop and administer peer-to-peer innovations that train students, faculty, and staff on how to best support college students in recovery.

Research on the use and efficacy of CRPs on college and university campuses was still in developmental stages, as data were lacking on various CRP models and the long-term effects that participation in such a program had on students (Laudet et al., 2014). Because resources differ on every campus, CRPs vary in what they offer students. Some CRPs offer housing and follow the model of a residential treatment center, and many have dedicated staff members to support the efforts of the program (Laitman, Kachur-Karavites, & Stewart, 2014).

Researcher Positionality Within the Context

In 2016, ASU secured a grant from the Arizona Governor's Office of Youth, Faith, and Family to establish a CRP called Recovery Rising. From the academic year of 2016-2017, I worked as the Associate Director of ASU Wellness, where my primary responsibility was managing Recovery Rising. The mission of Recovery Rising was developed to fulfill both grant and university responsibility to ASU students in recovery. The goals established were to provide visibility of recovery as a lifestyle, connect students in recovery to one another, develop a departmental continuum of care for

students in recovery, and provide training on recovery that would be free and accessible to students, faculty, or staff.

In cultivating ASU's CRP, I set out to build a new university model for students in recovery. Because ASU had 92,000 students in 2016, the reach and scale of Recovery Rising had to be big. A residential treatment model would not work to provide information and create visibility about recovery to such a large number of students across four university locations in the Phoenix Valley. From reading research on CRP models, I found that college students in recovery have been studied as an entity separate from the larger environment, disparate from other students who are not in recovery. Support for students in recovery has largely been offered by other students in recovery, or through addictions counselors and CRP housing staff. The model I created was one that held potential for cultural change in broadening support for students in recovery. The goal was that such students would feel supported by not only each other, but *also* by the nonrecovery peers, professors, and staff they may encounter in their college life.

To aid in these efforts, the grant monies supported the hiring of two management interns (MIs), graduate student employees who work toward development of a CRP presence on ASU's four campuses (Tempe, Polytechnic, Downtown Phoenix, and West). In addition to the hiring of two MIs, the grant monies were designated toward program and event planning, as well as resources required for a recovery training for ASU students, faculty, and staff who were interested in learning more about students in recovery and supporting them in their recovery efforts. These trainings, called Recovery 101 and Recovery Ally, were my innovation and dissertation research topic.

In Summer 2017, I accepted a job opportunity at ASU with the Center for Mindfulness, Compassion, and Resilience. While this job removed me from managing the CRP directly, I was still involved with the context relatedly as a member of the Recovery Rising Advisory Board. The mission of the Center for Mindfulness was to promote mindfulness to the ASU community and a greater awareness and compassion toward self and others, which can ultimately strengthen resilience, or a "bouncing back" from adverse situations. The Center's mission was easily linked to those within the recovery community, who demonstrate a great resilience by continuing to manage their recovery, and to the peer educators (called the Well Devil Ambassadors), who were the participants in the training intervention and who work to promote not only a culture of health and wellness at ASU, but also a culture of caring and compassion. Mindfulness has also been researched and proven to lead to the development of skills, such as self-efficacy, which is linked with confidence in performing tasks within academic or employment contexts (Bohecker & Doughty Horn, 2016; Kabat-Zinn, 2990; Pipe et al., 2009). It is with these research-backed ideas in mind that I incorporated basic aspects of mindfulness into the Recovery 101 and Recovery Ally trainings, which were the focus of this study.

Situational Context

ASU administration was interested in developing resources for students in recovery before the grant opportunity came along. In Spring 2015, ASU Wellness, ASU Housing, and ASU Counseling Services held an open forum for any ASU departments, faculty, staff, students, and community members who were interested in helping with recovery efforts. Treehouse Learning Community, a sober residential house located close

to ASU Tempe on Mill Avenue, was a community partner in this forum. While open to students from any college or university, Treehouse Learning Community and ASU had a memo of understanding (MOU) to work closely together to build out the CRP.

Following the open forum, ASU students formed a student organization called Students for Recovery in Fall 2015. To become recognized as a student organization at ASU, the students registered with the online organizational system called Sun Devil Sync, found and secured an advisor (e.g., a requirement for club registration, an advisor is a university faculty or staff member serving as the designated overseer of the club's operations), and wrote a mission statement. Registering as a student organization allowed for recognition with other organizations and access to apply for funds through the Undergraduate Student Government. The advisor for Students for Recovery was Dr. Linda Lederman, a professor and the department chair in ASU's Hugh Downs School for Human Communication. The mission statement of Students for Recovery was to "promote the academic and social well-being of recovering students, faculty, and staff at Arizona State University through the practice of social justice, empowerment, and community building" (ASU Tempe Students for Recovery, 2016).

The open forum and formation of the student organization were instrumental to providing context and ideas about what the CRP could look like. Survey data, discussed in the next section, were also greatly beneficial to understanding the population of students who have a history of addiction and to understanding the student need for recovery information and programming.

American College Health Association – National College Health Assessment

Every year, ASU Wellness, a department of Educational Outreach and Student Services, conducts a campus-wide survey called the American College Health Association – National College Health Assessment (ACHA-NCHA), which provides student health and wellness trend data. The ACHA-NCHA data are collected from numerous colleges and universities nationwide, so that local data can be compared to the National Reference Group (see Appendix A for survey population size by year, ASU students, and National Reference Group). Relevant recovery-related results from ASU students are examined and described in the following section.

In April 2016, the survey was sent to a random sample of students, including undergraduates and graduates at all ASU campus locations. There were 1,584 students who completed the survey. Out of the participants who took the survey, 10.7% were students of the Downtown Phoenix campus (n = 170), 4.6% at Polytechnic, 57.1% at Tempe (n = 73), 3.5% at West (n = 55), 22.6% were online-only students (n = 358), and 1.5% were in the Other category (n = 24). The following supplementary questions on history of addiction to alcohol and other drugs, history of recovery, and recovery programming and information were added to the administration of the ACHA-NCHA survey. The following questions could be answered with a *yes* or *no*:

1. Have you ever been in treatment for alcohol or other drug problems?
2. Are you currently in treatment for alcohol or other drug problems?
3. Are you currently in recovery from alcohol or other drug problems?
4. Are you interested in recovery programming on your campus?
5. Have you received information about collegiate recovery from ASU?

6. Are you interested in receiving information about collegiate recovery from ASU?

These data were collected and analyzed by the Director of ASU Wellness, Dr. Karen Moses, to prioritize high-need student populations. The results are described in the following section.

Questions 1, 2, and 3 were combined without duplication to provide a new data point: history of addiction (see Figure 1). Almost 5% of students (4.7% or $n = 74$) indicated they have a history of treatment to alcohol or other drugs or are in recovery from an addiction. Additionally, 39.7% of ASU students within the sample who had been treated or were currently in treatment for addiction to alcohol or other drugs ($n = 30$) indicated they were currently in recovery from addiction.

As illustrated in Figure 2, the subgroups with the highest proportion of students who have a history of addiction included students who have served in the U.S. armed forces (10%); lesbian, gay, bisexual, and other queer students (8.9%); and online-only students (8.5%). Nearly 5% ($n = 4$) of students indicated interest in recovery programming. Subgroups who expressed the highest interest in recovery programming included Black/African American students (11.3%), international students (10.1%), and students taking classes at the ASU West campus (7.2%).

Nearly 8% of students indicated they had received information about collegiate recovery from the university, yet 25% indicated they are interested in receiving information on collegiate recovery from the university. The proportion of students interested in receiving information on collegiate recovery was 3.2 times greater than those who received the information, leading to an “interest gap” (see Figure 3).

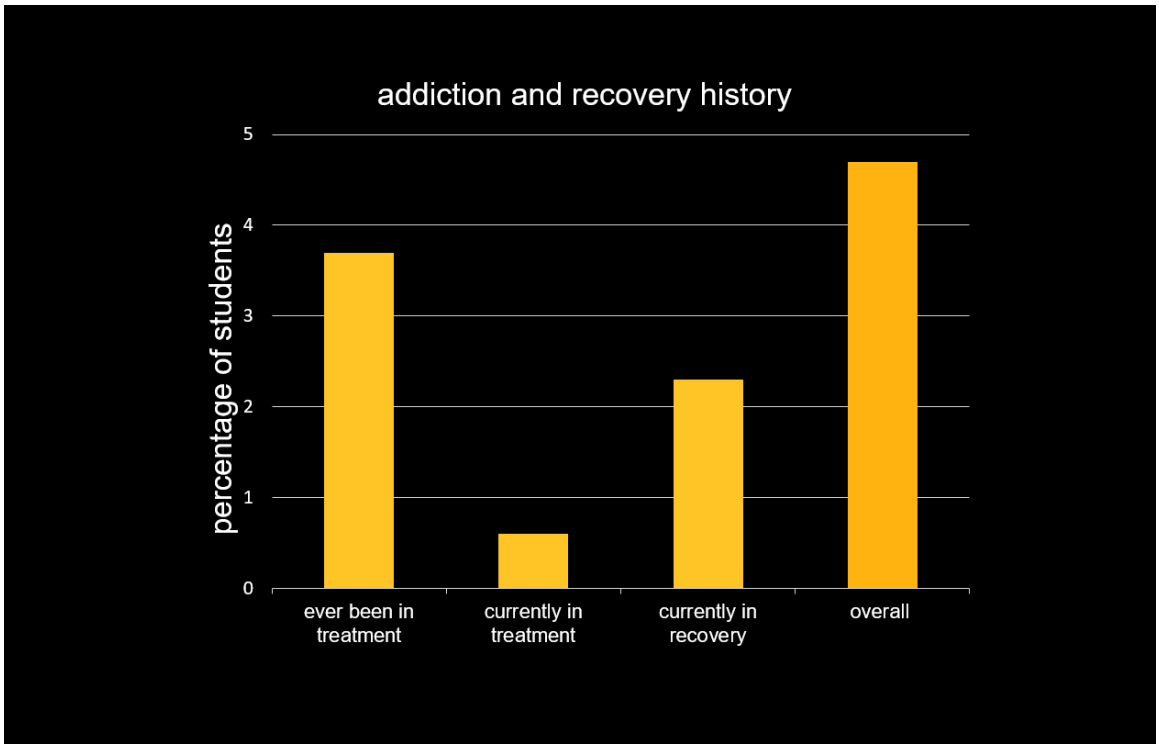

Figure 1. ASU students with a history of addiction.

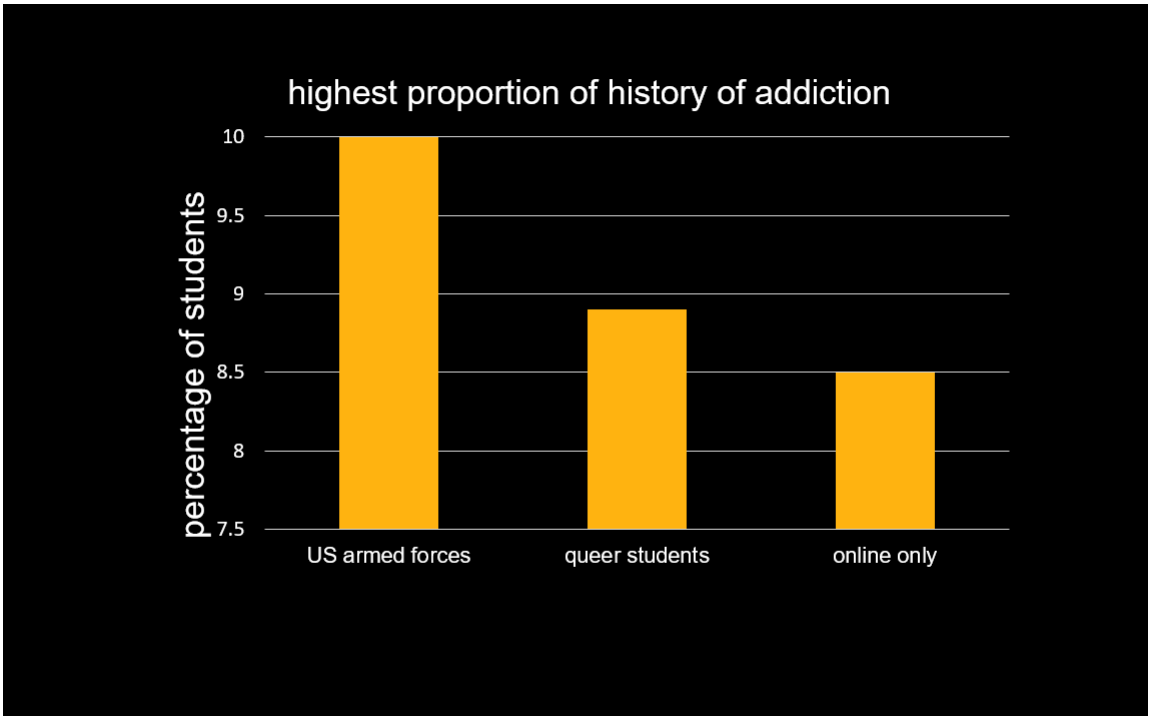

Figure 2. ASU students with the highest proportion of history of addiction.

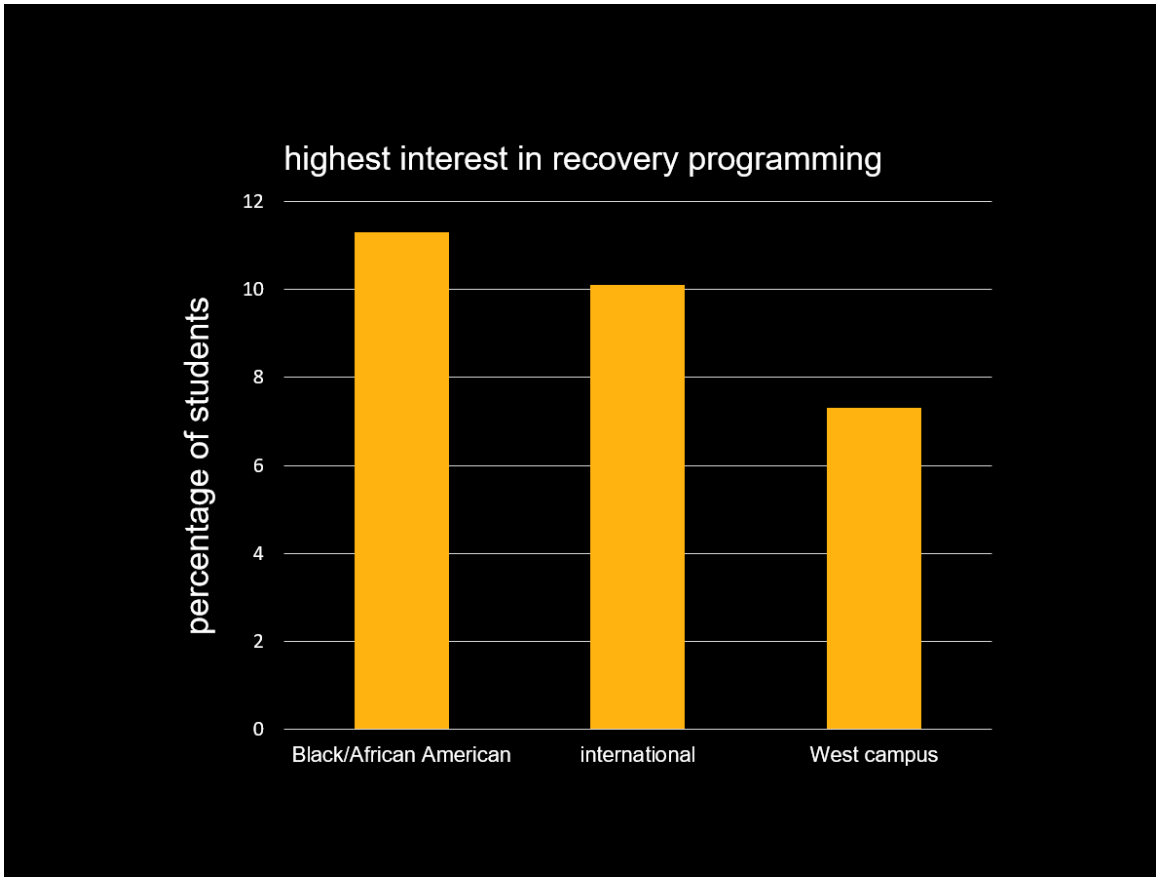

Figure 3. ASU students with the highest interest in recovery programming.

Subgroups with the widest interest gaps include student employees within ASU's Educational Outreach and Student Services (EOSS) department (36.1%), student employees of academic departments (29.1%), and 21- to 24-year-old students (29.1%).

Figure 4 shows the interest gap breakdown, which is representative of the entire survey population (n = 1,584). A significant data point was that those who indicated they did not have a personal history of addiction were more interested in recovery information than those who did indicate they had a history of addiction, perhaps indicating general interest in recovery, family history, or having friends or family members with a history of substance abuse or recovery.

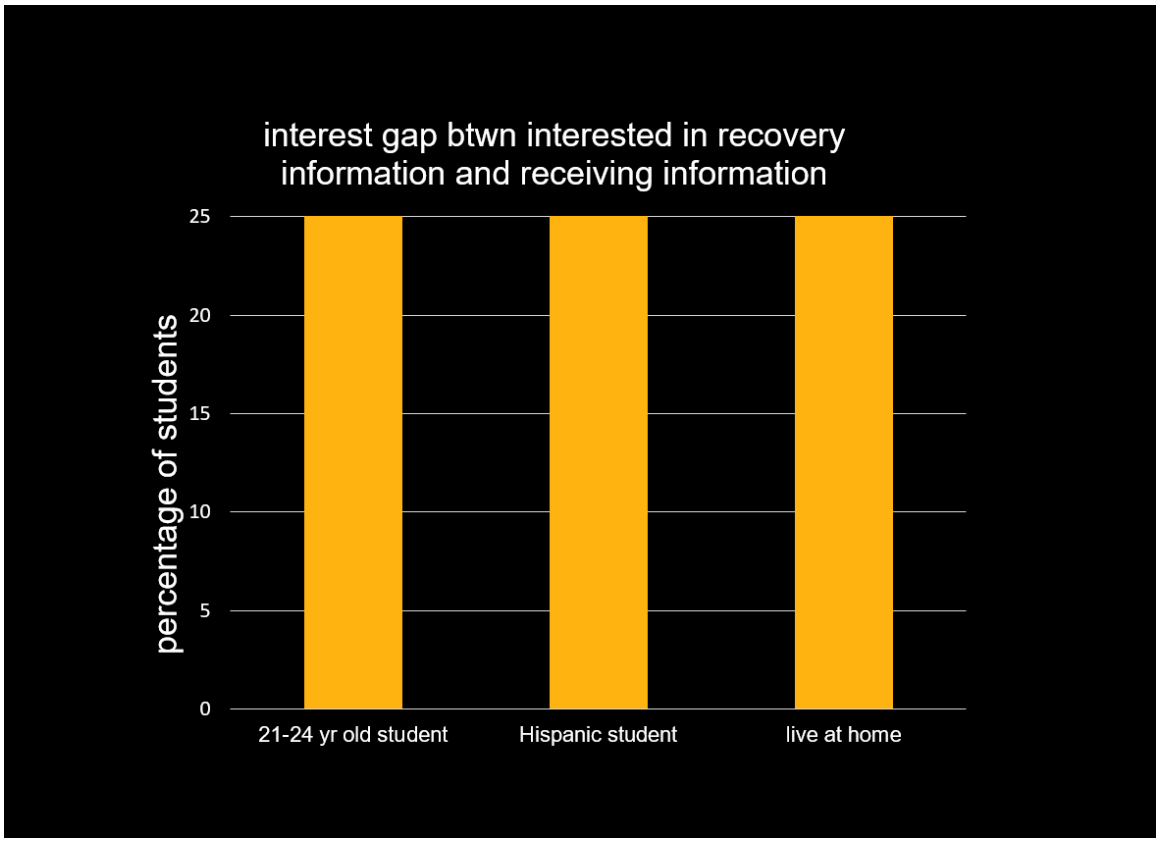

Figure 4. Interest gap among student employment groups.

The ACHA-NCHA analyzed survey data were made available in late Fall 2016 through the ASU Wellness department and helped shape the direction of targeted intervention efforts for the Spring 2017 semester. This strategic approach to training and programmatic efforts was essential to reach the audiences who would benefit most. As the audiences were identified, CRP communications became targeted to reach the populations who need the recovery services and support—specifically those in the Armed Forces (subgroup with the highest proportion of history of addiction) and student employees (subgroup with the highest interest gap).

While this data on substance use, abuse, recovery, and support services are specific to the student population, issues of wellness extend beyond students to faculty and staff. The culture of a university is inclusive of all of its members—students, faculty,

staff; therefore, various populations could potentially be studied. This could be a subject for a larger study in future research.

Summary of Introduction

Many factors contributed to the development of this study and the Recovery 101 and Recovery Ally training intervention. The larger federal context provided a sense of national urgency to working on the problem of alcohol and drug use within the college-age population. The open forum held at ASU in Spring 2015 to understand the needs of students in recovery, along with the development of the student organization Students for Recovery, created a ground-level, grassroots movement around students in recovery. Institutional support from ASU offered the platform for state-level grant funding to cultivate a CRP. The ACHA-NCHA survey data delivered essential information to scale out a CRP to targeted audiences in the largest university in the United States. My transfer to the ASU Center for Mindfulness, Compassion, and Resilience allowed me to incorporate mindfulness practices into the trainings. This held the goal of developing peer educator self-efficacy in promoting recovery efforts, as well as the hope that when the people supporting recovery were trained in mindfulness, it may disseminate through influence to students in recovery as well.

The purpose of this doctoral study was to integrate information learned nationally, locally, and through my time leading the CRP at ASU to create, present, collect, and analyze data for two trainings called Recovery 101 and Recovery Ally. Recovery 101 was presented to ASU peer educators called Well Devil Ambassadors as part of their overall mandatory 40-hour training, while Recovery Ally was an optional training for four self-selected WDAs. The Well Devil Ambassadors program was established in 2013

by the ASU Wellness department. The name Well Devils is a play on Sun Devils, which is the nickname for the ASU athletic teams. The WDAs are undergraduate students who apply, are selected, and are then trained to support other ASU students in health and wellness topics. Health and wellness support includes knowledge-building programming, such as planning and hosting events for national awareness months (tobacco cessation, domestic violence, AIDS prevention) and creating related poster and flyer campaigns to display in their residence halls. More information on WDAs is noted in Chapter 3.

The overarching goal with this dissertation project was to create a supportive, compassionate, and welcoming environment for students in recovery at ASU. Through the training of student peer educators who were already embedded within the university, the objective was to build a community that understands basic elements of the recovery lifestyle so students in recovery may feel supported within the campus community by their peers.

The two training innovations, Recovery 101 and Recovery Ally, were designed for several reasons: (a) to meet one of the objectives of the grant, which was to deliver campus-wide recovery training; (b) to provide the entire campus community with a resources from which to learn about recovery; and (c) as the innovation that was studied for this dissertation on the group of student peer educators, called Well Devil Ambassadors, to learn how and to what extent the trainings impacted their knowledge, attitudes, behavioral intentions, self-efficacy, and mindfulness if and when they encountered and worked with students in recovery. In the following section, previous cycles of research leading up to the final version of this innovation are noted.

Previous Cycles of Research

The design of the final training innovation was informed by two previous cycles of research. Cycle 0 was conducted in Spring 2016, and Cycle 1 was conducted in Fall 2016. During Cycle 0 research, I sought to identify the needs of students in recovery from addiction to leverage the CRP to be in a position to better understand and support these students. This research was a valuable needs assessment, the results of which allowed me to conceptualize and develop a pilot version of Recovery 101 and Recovery Ally training for Cycle 1. In turn, Cycle 1 research allowed me to redesign the trainings and survey instruments to be more understandable to the students and to align with theoretical perspectives. These two cycles of introductory research informed and shaped the groundwork for the final version of the Recovery 101 and Recovery Ally innovations. Cycle 0 and Cycle 1 research is described in this section.

Cycle 0

The CRP at ASU was in initial stages of development and planning in Spring 2016, and my first stage of inquiry into developing this program was to gather information from students in recovery about how the CRP could best support their needs. To understand how to best create goals and objectives within the situational context of ASU's CRP, I interviewed members of the newly formed student organization, Students for Recovery. The two research questions used to guide Cycle 0 work were:

RQ1: How do students in the ASU organization Students for Recovery envision this group functioning?

RQ2: What kind of preparation or training would benefit Students for Recovery members as they work toward building their three organizational pillars of Awareness, Fun, and Service?

The purpose of collecting qualitative interview data from three participants in the ASU student organization Students for Recovery was to find out how the group functions and to determine how the CRP can be of assistance and support to their efforts. Three undergraduate participants from the student organization, Students for Recovery (two males, one female), were interviewed (see complete set of questions in Appendix B).

The three themes that emerged from the line-by-line coding and analysis were: (a) social support/safety, (b) education and awareness, and (c) community service/advocacy. The theme of education and awareness was expressed by the participants when they stated students in recovery would benefit if the community in which they live (i.e., ASU and surrounding areas) understood more about addiction and what it means to be in recovery. Data included the students stating that others should be "recognizing alcoholism and drug addiction as a disease and not a choice and to not hold it against you, to not be put at a disadvantage," "reducing stigma," and "understanding exactly what addiction is: partying too much is not addiction." This theme in particular helped develop the Recovery 101 and Recovery Ally training innovation. The objective of the training was to educate students, faculty, and staff on the topic of addiction and recovery and to define ways to support students in recovery.

Cycle 1

Using the data collected and analyzed from the three interviews during Cycle 0, I created a training intervention called Recovery 101 and Recovery Ally for a pilot study to

be implemented with 17 WDAs, the trained undergraduate peer educators who live and work in ASU residence halls. Recovery 101 was a 3-hour training and part of the 40-hour WDA curriculum developed and led by their supervisor. This training included a 1.5-hour lecture developed and led by a staff member of Treehouse Learning Community, the sober living treatment center in Tempe, AZ. The lecturer discussed the history of CRPs in the United States, the neurobiology of addiction, and terms and vocabulary to use when speaking with a student in recovery. Learning objectives included increasing the knowledge of the WDAs when supporting students in recovery and building skills by learning appropriate language to use when speaking to students in or about recovery.

After the lecture, five students in recovery sat on a 1-hour panel to share their stories of the recovery process while in college. Learning objects were for the WDAs to acquire more awareness about the recovery process to better engage with students in recovery by learning about their experiences. Fifteen minutes was allotted for a question--and-answer period at the end of the lecture, and again at the end of the panel, for a total of 30 minutes.

To measure the impact of the lecture and panel, a pre- and post-mixed-methods survey was collected from the WDAs before and after the Recovery 101 training to measure their levels of self-efficacy as related to supporting students in recovery from alcohol and other drug addiction. The survey included a confidence scale that measured levels of self-reported efficacy of verbal support (talking to/having a conversation with students in recovery) and resources (sharing resources/knowledge of resources) before and after the training. The survey questions are in Appendix C. For the pre and

postsurvey descriptions of "alcoholic" and "addict," I created a WordCloud for a visual representation of the data collected (see Appendix D).

The follow-up to the Recovery 101 training was called Recovery Ally. Directly after the Recovery 101 training, I recruited six WDAs to work with me in the CRP. Although the six WDAs self-selected to work with me, their time with me was considered part of their WDA job responsibilities (approximately 2 hours a month for 3 months, and this was cleared and approved by their supervisor). Learning objectives were to build on the knowledge gained in Recovery 101 by studying the training, reading a book about college students in recovery, and working together to become proficient in working on recovery-related programs, trainings, and events as an enhancement to their peer educator portfolios. Six WDAs signed up to become Recovery Allies. Throughout the 3 months of the Fall 2016 semester, I provided them with an electronic and hard copy of an edited and condensed, 45-minute version of the Recovery 101 lecture PowerPoint they could use in their programming efforts and a facilitation guide; they read a book called *Voices of Recovery from the Campus* by Dr. Linda Lederman, which described narratives from college students in recovery, and they were encouraged, though not required, to organize a project at the end of the semester to enlighten their residential community about recovery. Three out of six WDAs organized a final project. One WDA chose to create a Well Wall bulletin board illustrating various articles and promotional materials on recovery (see Appendix E), while two chose to work together to bring a panel of students in recovery to speak on campus. Finally, a follow-up survey was distributed at the end of the Fall 2016 semester to the six WDAs who worked on recovery issues throughout the semester (see Appendix F).

The Recovery 101 and Recovery Ally innovations were both met with enthusiasm by the WDAs, and anecdotal evidence suggested they learned about addiction and supporting students in recovery as a result of the training. For further analysis of the Recovery 101 training, I conducted a cross-tab, chi-square, and Cronbach's alpha to analyze the quantitative questions where all the WDAs responded on a confidence scale (0-100) where 0 = *cannot do at all*, 50 = *moderately can do*, and 100 = *highly certain can do*. The null hypothesis was that there was no relationship between confidence in providing types of support (e.g., verbal, social, or knowledge of resources).

All participants were asked to respond to two questions about verbal support: Question 5, "I am comfortable talking to a self-identified student in recovery," and Question 8, "I am at ease having a conversation with a self-identified student in recovery" (n = 13). The average mean for "having a conversation" was slightly lower (87.31) than the mean for "talking to students in recovery" (89.23), which indicated WDAs felt slightly more confident talking to a student in recovery than having a full conversation. I calculated the chi square relationship between knowledge of resources and the confidence to share those resources with students in recovery. The confidence range distribution was between 60% to 100% on the confidence scale (0-100), with wide response ranges. The alpha level was set at 0.05, so the p value of 0.01 meant the null hypothesis was rejected, the link between knowledge of resources and sharing of resources was not by random chance, and confidence in one is associated with the other. However, a Cronbach's alpha test analysis showed quite a bit of variance, suggesting that some of the WDAs did not understand the questions very well. These data show that

these questions were worded incorrectly and need to be deleted or rewritten to have greater reliability.

Purpose of Study

Conducting the first two cycles of research were of great benefit for understanding the direction of my larger innovation for the purposes of this dissertation research. The cycles illuminated several pieces of information for me. First, students in recovery at ASU understood the campus to be a "recovery desert," meaning they perceived that there are not enough services, activities, or social opportunities available for students in recovery. I understood their statements to mean that ASU is thought of as a place where their life choices are not understood or validated.

Second, I came to understand peer-to-peer support as an important method of information distribution and validation for college students. It is with this knowledge that I created the training innovations, Recovery 101 and Recovery Ally, for the WDAs. While the WDAs may never encounter or have the chance to work with a student in recovery, they may well do so, and they are in a prime position through their employment status to create a culture of acceptance and understanding around recovery support, thereby leading to a more empathetic population of students.

Through my work at the Center for Mindfulness, Compassion, and Resilience, I realized the value of incorporating mindfulness practice into one's daily life. As noted above, mindfulness can lead to self-efficacy, self-compassion, and reduced stress. Learning more about mindfulness led me to see how incorporating the practice into my training innovations could serve to boost the skillsets of the WDAs. As student employees, WDAs can take the skills they learn through their job as peer educators with

them after graduation. Embedding job readiness skills is a key part of their college experience, and mindfulness can serve to enhance both professional and life skills (Kabat-Zinn, 1990). Therefore, the final piece of incorporating skills of mindfulness practice became an important piece of the final training.

Creating a culture of caring is a lofty goal, but as Margaret Mead noted, change often begins with a small group of dedicated people. Cultivating an empathetic campus culture as related to recovery support services was my hope for my innovation, so that students in recovery may feel welcome and supported by the environment in which they live. A full, detailed description of the innovation is presented in Chapter 3.

Organization of Dissertation

This dissertation is a mixed-methods study using both qualitative and quantitative research to investigate a training that was developed to provide peer educators with the knowledge and skills to support students in recovery from addiction. Chapter 2 provides the reader with the overarching philosophy and theoretical perspectives that were used to frame the lens through which the research was conducted. Chapter 3 explains the methodology, including the participants, setting, innovation, and instrument used to conduct the research. Chapter 3 also lists the research questions used to create the data collection instrument for this study. Research questions will measure the impact of Recovery 101 training on five constructs related to the theoretical perspectives of knowledge, attitude, behavior intention, self-efficacy, and mindfulness as reported by the WDAs.

CHAPTER 2

THEORETICAL PERSPECTIVES AND RESEARCH GUIDING THE PROJECT

Chapter 1 provided the national, local, and situational context and the purpose of this project. Preliminary data from Cycles 0 and 1 provided background on the development of the Recovery 101 and Recovery Ally training interventions. In Chapter 2, I describe the philosophical underpinnings and theoretical frameworks through which my project was conceptualized and how these philosophies and theories were used to inform the enactment of the innovation. The constructs and theories covered include mindfulness, self-efficacy, and the theory of planned behavior. The philosophy of mindfulness served as a guiding factor in the creation, development and implementation of Recovery 101 and Recovery Ally training—because mindfulness practices were one of the wellness practices shared with participants; thus, it was a contributing factor in the interventions. After defining and describing mindfulness, I review the perspectives of self-efficacy and the theory of planned behavior, which factor strongly into these interventions, with examination of relevant studies that have also used these theoretical frameworks.

The philosophy of mindfulness along with the theoretical perspectives of self-efficacy and the theory of planned behavior were the theoretical lenses through which the Recovery 101 and Recovery Ally intervention were shaped and conceptualized, as related to the problem of practice. Mindfulness was used as an overarching philosophy related to the enhancement of skills, such as compassion and self-efficacy, skills from which the WDAs could benefit in their work as peer educators. The theory of planned behavior and self-efficacy informed the development of learning objectives for the trainings

(knowledge, attitude, behavior intention, and self-reported efficacy), as well as the survey instruments and measurement tools that were used to analyze the impact of the trainings.

Overarching Philosophy – Mindfulness

Mindfulness is defined as a practice of "nonjudgmental, moment-to-moment awareness" (Kabat-Zinn, 1990, p. 2). The practice of mindful awareness is a lifestyle; it is not finite, and the mindful practitioner is never "done" exercising mindfulness. Mindfulness is a way of reconnecting with the inner self by bringing attention and awareness to the present moment. Awareness of the ideas and thoughts that go through the mind is important, as thoughts can influence emotions. The way we think about our physical body and our circumstances can either expand or limit our ability to live in the present moment without judgment. In fact, mindful meditation is a practice in being present in the moment without judgment—a way to "be" instead of "do" (Kabat-Zinn, 1990).

Mindfulness philosophy acknowledges that experiences and emotions are stored within the body and within the subconscious (Kabat-Zinn, 1990). Emotional repression ("blocks") can be stored in the body and, in turn, released through the practice of mindful meditation. The awareness of the body can lead to an "unblocking" of emotions that have taken up space in the body and mind. The blocks can produce physical ailments and take up a lot of room emotionally, while the unblocking of these emotions can free up space to experience more of life by training the participant to experience and be present in only the present moment, rather than ruminating about the past or thinking about the future. Because mindfulness allows the participant to live fully in the present moment, "energy

that was once spent clinging to the past or worrying about the future can now be spent in the present" (Pipe et al., 2016, p. 46).

Freeing the energy that is consumed by experiences and thoughts about those experiences calls for a practice of nonjudgmental awareness, which is an acceptance of life events minus the automatic response of labeling them as "good" or "bad," rather, accepting happenings or people as they are without attempting to control them (Kabat-Zinn, 1990). For example, if one's body is feeling well, we do not think much about it, but when we have an ailment or an injury, that physical part of our self is brought into focus. Mindfulness is about acknowledging and appreciating the physical body when it is feeling good or when it is in pain. Nonjudgmental observations of the mental or physical form and its ability or disability is a form of mindful meditation.

Studies Based on Mindfulness

A wealth of literature about mindfulness and meditation has become readily available for public consumption, with some literature researching the effects of mindfulness on the undergraduate and graduate student population (Bohecker & Doughty Horn, 2016; Burke, Dye, & Hughey, 2016; Caldwell et al., 2010; Hall, 2009; Klainin-Yobas et al., 2016; Luberto et al., 2014; Rogers, 2016; Taylor et al., 2014). The benefits of mindfulness are well-studied and show that mindfulness has been linked to a wide range of benefits in both personal and professional dimensions of life, including enhanced time management skills (Kabat-Zinn, 1990); compassion toward self and others—in other words, kindness (Pipe & Bortz, 2009; Pipe et al., 2016); and increased self-efficacy, or the perception of one's own abilities (Bohecker & Doughty Horn, 2016; Pipe et al., 2009).

Interventions, such as mindfulness-based stress reduction (MBSR) created by Jon Kabat-Zinn, Professor of Medicine Emeritus and Executive Director of the Center for Mindfulness in Medicine, Health Care, and Society at the University of Massachusetts Medical School, were developed to reduce stress, promote a rise in nonjudgmental awareness, encourage a positive outlook, and increase self-efficacy. Mindfulness-based stress reduction is a formal, 8-week course that aims to guide the student toward leading a more mindful, intentional life. Through sessions such as mindful eating, walking, and communication, the student learns to regulate their emotions to external stimulus (i.e., traffic, emails, and other people) and to react intentionally rather than automatically. In other words, MBSR teaches the student to live a life of one's own design rather than default (Kabat-Zinn, 1990). Data from these numerous interventions have shown that mindfulness lowers stress (Chang et al., 2004); decreases "burnout," or work fatigue (Lawrence, 2002); increases compassion toward self and others (Pipe et al., 2016); lessens anxiety (Hall, 2009); treats depression (Alexander et al., 2012; Kabat-Zinn, 1990); and increases resilience, defined as "the ability to adapt to life's ever-changing landscape and recover quickly from stressors and potential stressors" (Pipe et al., 2012, p. 12).

Mindful compassion toward self along with self-reflection can lead to compassion toward others. These are important traits when working as a wellness peer educator and leading other students to make healthy life choices. Resilience in the face of difficulty of those in student leadership positions can be enhanced through the reduction of stress symptoms, such as burnout. In college students in particular, a greater acceptance in the face of disappointments and stressors; resilience, or "bouncing back" from life

challenges; and equanimity, or a more balanced mood are benefits that mindfulness can bring (Rogers, 2016). Mindfulness, self-efficacy, and resilience are strong indicators of whether one's psychological well-being will be positive or negative (Klainin-Yobas et al., 2016). Healthy coping skills, nonjudging awareness, and an optimistic, positive outlook are internal skills that contribute to increased effort toward a task and higher self-efficacy (Luberto et al., 2014), while traits such as anxiety and depression are negatively correlated to confidence and self-efficacy (Alexander et al., 2012; Hall, 2009).

Mindfulness was of interest for the purposes of the Recovery 101 and Recovery Ally innovation interventions as a way to enhance the WDAs' sense of self-efficacy when working with and supporting other students, specifically students in recovery from addiction. Because of the importance of compassion and well-being, both as a trait peer educators inculcate in themselves and share and offer to other students, it served as a valuable concept in these trainings. Mindfulness exercises adapted from Jon Kabat-Zinn's MBSR course were incorporated into the trainings and measured using four questions from the Mindfulness Attention Awareness Scale (MAAS; Brown & Ryan, 2003; Carlson & Brown, 2015). More specifics on this will be noted in the description of the intervention.

Theory of Self-Efficacy

The Recovery 101 and Recovery Ally innovations were designed with the goal and intention to impact WDAs' perceived internal skills, or self-efficacy, when supporting students in recovery from addiction. According to Bandura (1993), self-efficacy is an internal regulatory mechanism that can define how an individual views their levels of control and agency over their own life situations. Bandura's (1977) theory

posits that self-efficacy influences where and how one engages in the world (e.g., the education or employment one seeks). The settings chosen and the effort exerted toward tasks are in direct proportion to individual expectations of success or failure in the environment or the endeavor.

The three dimensions of magnitude, generality, and strength are variants of efficacy expectations (Bandura, 1977). Magnitude refers to self-efficacy in relation to an individual's expectation of efficacy based on their beliefs about the difficulty of task. Efficacy expectations may vary depending on whether a person is envisioning completing a simple versus difficult task. For example, low magnitude self-efficacy refers to foreseeing success with an easy task and failure with a more demanding task. The dimension of generality suggests some people will generalize the success of one task to other similar tasks, while others will only feel efficacious when faced with the one particular task that they mastered. Strength refers to the persistence of efforts. Strong self-efficacy can be used to persist in mastering more and harder tasks, while someone with weak self-efficacy can be destroyed in the face of failure.

Bandura (1977) also suggests that expectations of efficacy are informed, influenced, and enhanced by the following information: (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) physiological states. Performance accomplishments, or mastery experiences, occur when a person has completed a task, successfully dealt and coped with associated risks or challenges, and experienced little or no negative consequences. Mastering a task is the best way to build strong self-efficacy that is generalized to different tasks, and it lessens fear or defensiveness about the ability to cope with difficulty. Failure at a task can increase

avoidance toward experiences and reduce self-efficacy expectations, while meeting challenging situations successfully can strengthen perceptions of efficacy.

Self-efficacy can be strengthened by vicarious experiences, otherwise known as modeling. Watching others successfully accomplish tasks can influence perceptions about self-efficacy in completing the same or similar task. Knowing someone else can complete a difficult task can make it easier to accept that it can be accomplished by others, thus raising self-efficacy for that task. Verbal persuasion, while not experiential and therefore the weakest way to influence self-efficacy, refers to what happens when an individual receives the positive affirmation and feedback from others to suggest success is possible and that the individual can indeed be successful in accomplishing the task. Finally, physiological states, or emotional arousal, can provide information about efficacy expectancies and either damage or bolster perceptions about success. Anxiety and fear arousal will increase avoidance behaviors and decrease self-efficacy, while successful coping mechanisms will increase self-efficacy. Each of these factors, in turn, has different potential effects and interactions upon self-efficacy.

Self-efficacy can be cognitively processed in four different ways: (a) cognitive, (b) motivational, (c) affective, and (d) selection. Cognitive processes influence individual perception and emotions dealing with levels of self-efficacy. These processes can influence goal-setting in either positive (visualizing success) or negative (self-doubt) ways. Cognitive processes may explain why an individual who has the knowledge and skills to accomplish a task does so either well or poorly based on their thoughts and feelings about their abilities.

Motivational processes relate to how well an individual believes they can accomplish a task in anticipation of the task. The three motivators are: (a) causal attributions, (b) outcome expectancies, and (c) cognized goals. Causal attributions relate to the attributions a person places on success or failures. If a person perceives themselves to be highly efficacious toward a task, a successful outcome of that task is attributed to their level of effort. On the other hand, if a person perceives themselves to have low self-efficacy toward a task, a resulting failure could be attributed to low ability. Outcome expectancies refer to self-beliefs about efficacy that can determine the outcome of the task being performed. This self-belief, in turn, influences internal motivation to begin or continue the task. Cognized goals are goals set and evaluated based on an individual's level of perceived self-attainment. All three motivators can determine whether one begins, continues, or completes a task and their resulting emotions related to the process.

Affective processes are the "emotional mediators of self-efficacy belief" (Bandura, 1993, p. 132), meaning that these processes influence an individual's level of control over stressors, depression, and anxiety surrounding a task. Affective processes, or emotional states, are related to physiological states allocated to a task. People who perceive themselves to have high self-efficacy in a task are more likely to be energized during their performance of the task, while people with high levels of anxiety are more likely to be plagued with self-doubt about task performance. Those who experience high levels of stress about a task are more likely to spend more of their cognitive effort coping with the perceived threat of the task, rather than the task itself. Therefore, emotions about self-efficacy can impact the degree of energy and effort exerted when working on a task.

Selection processes have to do with the choices individuals make in what they choose to participate in, based on their perceptions of self-efficacy. Perceptions of self-efficacy can influence what experiences, tasks, and environments individuals choose to participate in. These life choices add up to career paths and personal development.

Self-efficacy in the innovation. Bandura's (1977, 1993) theory of self-efficacy was chosen for the purpose of this project to have an intentional goal and theoretical framework for the WDA training intervention. Pre, post and follow-up questionnaires were conducted to measure WDAs' attitudes related to self-efficacy in being supportive peer educators to students in recovery from drug and alcohol addiction. The philosophical framework of mindfulness was incorporated into the training through short meditation exercises to increase the self-efficacy of the WDAs in supporting their peers.

The theory of self-efficacy presupposes that a person's involvement and engagement in tasks is directly related to their understanding of their efficacy surrounding that task (Bandura, 1977). Effort and emotion expended toward a task can be a measure of the success or failure of the task. In the case of the WDAs training to support students in recovery, facets of this theory were of particular relevance in enhancing WDA self-efficacy. For example, the Recovery 101 training provided the WDAs with tangible skills, such as proper vocabulary and questions to ask to encourage students in recovery to share their stories. This lecture was followed up with a panel of students in recovery sharing their experiences of what others did to help them during their recovery and a question and answer period with the WDAs afterward. This provided the WDAs with vicarious experiences, or modeling, of the behavior and vocabulary associated with supporting students in recovery.

An opportunity for goal setting was included in the Recovery 101 posttest ("Do you plan to be a "Recovery Ally?" If so, how will you support students in recovery?") and intended to influence the cognitive processes associated with visualizing success in anticipation of this task. As noted above, cognitive processes affect emotion and perception of self-efficacy. If the WDAs set a goal to be providers of support to students in recovery, this can influence their feelings about their abilities toward that task. These emotions can enhance their perception of self-efficacy and success when performing related tasks.

The Recovery Ally training was a longer and more intensive training in which four WDAs self-selected to participate. Recovery Ally spanned the entire Spring 2018 semester and culminated in an individual or group project coordinated by the WDAs (a training or an event meant to bring awareness to and support students in recovery). Bandura (1977) notes that mastery of a task is often the strongest method to raise self-efficacy. Conquering a new task successfully will enhance perception of ability to complete comparable tasks, making a person more likely to have a positive attitude and motivation to continue working on these tasks. However, failure at a task increases the chance of avoidance toward the task. Challenging the WDAs to create a successful event or training served to boost their motivation to continue engaging in similar supportive activities post-training.

The motivational process of outcome expectancies was enhanced through the WDAs' participation in the Recovery Ally training. The WDAs' beliefs about their self-efficacy served as either motivators or detractors toward a task. The curriculum of the Recovery Ally provided further training (post-Recovery 101) and was designed to

increase knowledge, attitudes, and skills toward supporting students in recovery. The additional training was intended to influence WDAs' beliefs and internal motivations to continue working on related tasks.

The theory of planned behavior, explained in the next section, posits that knowledge and attitude about a subject or task can influence the behavior intentions toward that task (Ajzen, 1985). Self-efficacy within the context of this innovation was intended to build upon and strengthen behavior intentions resulting from knowledge building and attitude influence.

Studies based on self-efficacy. Studies related to self-efficacy indicate the importance of mastery experiences for high achieving students. Researchers have found, even when levels of self-efficacy are similar within groups of college students, high achievers display greater levels of mastery experience than lower achievers (Fong & Krause, 2014). Bandura (1977) posits that self-efficacy works alongside behavior intention. Self-efficacy can drive an individual to be more confident when performing a task, and, as such, make them more inclined to perform said task.

Interventions focusing on self-efficacy in relation to improving health behaviors have shown that increases in mastery experiences, goal setting, and external social support can lead to better health outcomes. Self-efficacy has been shown to lead to increases in physical activity within adolescent groups, especially when combined with social support from family (Rahman, Shaibi, & Hoffner, 2016). College students, especially males, can be motivated to participate in physical activity when higher levels of self-efficacy are reported (Pauline, 2013). Mastery experiences have been indicated to be predictors in physical activity in older adults as well (Warner et al., 2014).

Journaling about issues of self-worth, such as confidence levels, is a qualitative instrument that has been used in self-efficacy studies (Fong & Krause, 2014). In Fong and Krause's (2014) research, student participants were asked to write journal entries of what made them feel confident or not confident to determine cognitive processes associated with their level of self-efficacy. Mastery experiences were found to be a predictor of confidence, as students initially classified as "underachieving" learners wrote about how they had little to no sense of efficacy due to lack of mastery learning experiences. The WDAs who participated in the semester-long Recovery Ally training were encouraged but not mandated to keep a journal for their own self-reflection as they progressed along their journey as peer educators in a position to deliver support to other students, specifically those in recovery from alcohol and other drugs. As these journals likely contained personal content, they were not collected upon completion of the study; rather, qualitative interviews were used to elicit reflections of the WDAs who participated in Recovery Ally.

Studies based on mindfulness and self-efficacy as connected. Self-efficacy can also be enhanced through mindfulness. Mindfulness practice is centered around the principle of nonjudgmental awareness. Humans have approximately 50,000 thoughts a day (Sparks, 2016). With awareness of thoughts that come and go on a regular basis, mindfulness encourages the practitioner to label thoughts and emotions for what they are (e.g., feelings of anxiety, happiness, worry). Rather than placing a morality or judgment on the thoughts and emotions, the practitioner develops an understanding of how much these thoughts can sometimes be judgmental to either themselves or others. With a clearer understanding of emotions and thoughts, the self-criticism that may run alongside

them is less subject to self-evaluation, criticism, or other people's opinions as indicators of self-worth (Neff, Hseih, & Dejitthirat, 2005).

When the internal, critical dialogue is lowered, self-criticism can be dulled, and self-efficacy can be enhanced. In studies with college students, interventions encouraging the practice of mindfulness into daily life have resulted in increased self-compassion, self-esteem, and self-efficacy (Smeets et al., 2014; Soysa & Wilcomb, 2015). Mindfulness has been shown to be linked to positive reappraisal after a failure, such as failing or doing poorly on a test (Hanley et al., 2015). Positive reappraisal results in significantly larger gains in self-efficacy following a failure. This suggests mindfulness training can add to resilience, or the ability to bounce back after an adverse experience. Although none of the WDAs had a negative experience working with students in recovery from addiction during their training, they may in the future. As such, the mindfulness training could potentially lead to a positive reappraisal and a desire to try working with a student in recovery again.

Theory of Planned Behavior

The theory of planned behavior (Ajzen, 1985) posits that a person's knowledge, subjective norms (perceived societal pressure to engage in a normative behavior), and attitude (an established way of thinking) about a given behavior, along with perceived behavioral control (self-efficacy toward a situation or task), is the best predictor of whether they will actually engage in a certain behavior. The breadth and depth of knowledge on a subject often influences how one feels about the subject. Knowledge also serves to inform the attitude toward that subject. Attitudes, while subject to fluctuation, are generally ingrained beliefs and worldviews; sometimes facts and

knowledge are not enough to alter attitudes. Behavior intentions are shaped by the person's subjective evaluation of the risks and benefits of the behavioral outcomes, as well as the ease or difficulty of performing the behavior at a given time or place. Taken together, knowledge, subjective norms, attitude, and perceived self-efficacy can be indicators for whether a person will or will not engage in a certain behavior. The theory argues that the best predictor of a behavior is the behavior a person actually intends to do. For this study, this entailed the constellation of attitudes, knowledge, social pressure, and intention that led to WDAs' behavior of supporting and providing resources to students in recovery from addiction.

Attitudes and beliefs are contributing factors to how and why we think of ourselves in the way we do. As Ajzen (2005) states, "To act in ways that are inconsistent with our past behavior or with our important beliefs, attitudes, or values would undermine fundamental assumptions related to the self-concept" (p. 27). Because attitudes and behavioral control are based on certain beliefs, interventions such as the Recovery 101 and Recovery Ally training must try to impact these attitudes to shape or reshape behavior. For instance, the opioid epidemic has been in a prominent spotlight in recent years, as noted in Chapter 1. In addition to bringing this problem to light, national attention to a specific issue can influence individual and public attitudes toward that topic. Before conducting the study, it was unknown whether WDAs' attitudes were positive, neutral, or negative toward the epidemic, and more importantly, to those who are impacted by the epidemic; therefore, the attitude-building portion of the training was included.

The theory of planned behavior is not without its limitations. One key drawback is the fact that it does not take into account other variables that influence intention, such as past experience and environmental and economic factors. The theory of planned behavior has been criticized for not identifying the link between past and future behavior. For example, previous experiences with a person thinking about or in recovery from addiction may have impacted WDAs' overall attitudes toward working with students in similar situations. Moreover, the theory of planned behavior assumes all behavior is the result of linear decision-making and does not take into account the possibility that it can change over time.

Studies related to the theory of planned behavior. Research studies have supported the link between components of the theory of planned behavior, such as attitudes, social norms, perceived ease, and self-efficacy, as well as behavior intentions and actual behaviors. The theory of planned behavior is effective in predicting health-related behaviors, such as underage drinking (Lac, 2013); college binge drinking (Norman, 2011); smoking (Norman, Conner, Bell, & Krantz, 1999); and safe sex (Cha, Kim, & Patrick, 2008).

Researchers have predicted and sometimes changed risky lifestyles through targeted interventions based on an individual's attitudes toward them. For example, attitudes among college students toward binge drinking and higher self-efficacy toward finding opportunities to imbibe alcohol predicted behavioral intentions to drink heavily (Norman, 2011). Smokers who perceived themselves to have higher control over their behavior were more likely to stick to a quit plan (Norman et al., 1999). Peer social norms

influenced male condom use, suggesting that when peers are perceived to engage in behaviors, their friends are more likely to as well (Cha, Kim, & Patrick, 2008).

The theory of planned behavior is useful for addressing and improving health behavior outcomes. The sobriety outcomes of students in recovery are negatively correlated to isolation and positively tied to social support (Bell et al., 2009). Therefore, training student peers employed in supportive positions, such as the WDAs, may increase the likelihood for positive health outcomes for students in recovery from alcohol and other drug addiction.

Summary of Theoretical Perspectives and Research Guiding the Project

This study was guided by the philosophy of mindfulness, the theory of self-efficacy, and the theory of planned behavior. Mindfulness, or the practice of focusing on the present moment without judgment, was meant to build upon various aspects of the WDAs' work. As noted earlier, mindfulness has been proven to increase time management skills, compassion, and resilience from adversity. When working with students in recovery, or any other group of peers, the WDAs can use these skills of empathy for the population they are supporting and can even increase logistical aspects, such as time management, of the WDAs' job responsibilities. The philosophy of mindfulness, especially as related to enhancement of self-efficacy, was a way of adding to the skills and training the WDAs were already acquiring and deepening to understand how to best support other students.

The theory of self-efficacy, specifically the aspects of vicarious and mastery experiences, goal setting, and motivation, were chosen as a method to drive the WDAs to view themselves as better able to provide support to students in recovery, thereby making

them more likely to seek out opportunities to provide such support. The theory of planned behavior guided the development of the Recovery 101 and Recovery Ally training. These trainings were intended to increase knowledge, attitudes, and behavior intentions of WDAs as related to working with students in recovery. Taken together, the theory of planned behavior, the theory of self-efficacy, and the philosophy of mindfulness may have inspired and led the path toward the WDAs sharpening their learning and skills to provide exceptional support to students in recovery.

Chapter 2 presented the overarching philosophical framework of mindfulness underlying this study. The theories of planned behavior and self-efficacy were explained as related to this project and supporting scholarship was reviewed. Implications of the theoretical perspectives and supporting research as they relate to the rationale for the Recovery 101 and Recovery Ally training interventions were described. In Chapter 3, the methodology for this study will be discussed.

CHAPTER 3

METHOD

Purpose of the Study

The methodology of this action research project will be described in Chapter 3. Before the description of methodology, an introduction and study context will be discussed. First, the setting, participant information, and researcher role will be discussed. Then, the procedure for the Recovery 101 and Recovery Ally innovation interventions to teach peer educators information and skills to provide support for students in recovery from addiction to alcohol and other drugs will be explained in detail. Finally, the data collection instruments and procedure will be discussed.

The purpose of this action research study was to explore the influence of the Recovery 101 and Recovery Ally training innovation on a cohort of Arizona State University (ASU) undergraduate peer educators called the Well Devil Ambassadors (WDAs). While the WDAs received training on college health and wellness topics ranging from alcohol awareness to nutrition information as part of their job responsibilities, no such training has previously existed for understanding how to support students in recovery from addiction. While there is no guarantee that the WDAs will encounter a student in recovery from addiction in their role at the University, they are potentially in a strong position to given their role in peer/student health support, and this training will support their own knowledge to enhance a culture of recovery. The training provided knowledge and skill building, which can lead to a well-rounded and empathetic peer education experience that takes into consideration the fact that recovery from addiction can be part of a student's life and well-being.

The Recovery 101 and Recovery Ally intervention was grounded in a mixed-methods action research methodology. The goal of action research is to improve practice within the setting of the researcher, as "action research is not the simple implementation of predetermined answers to educational questions; it explores, discovers, and works to find creative solutions to educational problems" (Mertler, 2014, p. 21). This systematic approach allowed for multiple stages of planning, acting, developing, and reflecting with the objective of understanding and improving the innovation intervention with each cycle. The training intervention, intended for student peer educator participants, was developed through knowledge gained in two previous cycles of action research (Cycles 0 and 1, described in Chapter 1 as contextual grounding for this study). The purpose of the final cycle of the intervention was to impart on peer educators the knowledge and skills to best support their peers in recovery from addiction.

Qualitative and quantitative data were collected and analyzed for my understanding of how the Recovery 101 and Recovery Ally training impacted the WDAs' knowledge, attitude, and confidence toward supporting students in recovery. Collection and analysis of both quantitative and qualitative data were consistent with a mixed-methods research design. Ivankova (2015) stated that the "most common integration strategy is combining the inferences from the interpretation of both quantitative and qualitative results to generate meta-inferences based on what was learned in the overall study process" (p. 156). The overarching perspective of mindfulness was the underlying philosophy to support the WDAs' sense of self-efficacy related to the training. The theory of planned behavior and the theory of self-efficacy, as described in Chapter 2, guided the structure of the intervention design and the development of the survey instruments.

The Recovery 101 and Recovery Ally trainings were designed to provide knowledge and tools to peer educators to support students in recovery from addiction. The Recovery 101 training were complete after one session, including the pre and posttest. The Recovery Ally training was complete after three sessions (one per month) during the course of one full semester, with a follow-up test at the end of the training. Data were gathered to answer these research questions:

RQ1: How and to what extent does Recovery 101 and Recovery Ally training inform peer educators' knowledge about students in recovery?

RQ2: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's attitudes about students in recovery?

RQ3: How and to what extent does peer educator knowledge and attitudes toward students in recovery influence their behavior intentions toward students in recovery?

RQ4: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's self-efficacy toward supporting students in recovery?

RQ5: How and to what extent does the practice of mindfulness throughout the Recovery 101 and Recovery Ally training affect peer educators?

Setting

The setting for this intervention was the Collegiate Recovery Program (CRP) program at ASU in Tempe, AZ, the largest university in the United States, serving 83,301 students in Fall 2014. Arizona State University offers students a range of support structures to meet well-being needs, from Counseling and Health Services to Career Services. Programs exist to provide students with extracurricular support as well, from

student clubs to fun, free, and sober weekend activities. While such programs engage students in socialization opportunities with their peers and promote well-being, there was no formal institutional support program for students in recovery from alcohol or other drug addiction.

To meet the needs of students in recovery, the supportive structure of CRPs on college campuses received national attention in the form of state funding (Office of Drug Control Policy, 2014). Arizona Governor Doug Ducey's Office of Youth, Faith, and Families awarded ASU an annual grant from Fiscal Year 2015-Fiscal Year 2018 to build and maintain a CRP on campus. The grant's scope of work had four main goals: (a) to increase the visibility of the recovery lifestyle at ASU; (b) to connect students in recovery to each other through meetings, sober activities, and events; (c) to enhance the ability of staff, faculty, and student leaders to support students who are in recovery through training opportunities; and (d) to provide a continuum of care for students in recovery across campus departments.

To meet the grant requirements of Goal 3 and to address a Problem of Practice in which there was a need for greater awareness among WDA peer educators about students in recovery and what they might face in their college experience, a two-part training called Recovery 101 and Recovery Ally was created to bring awareness to the recovery lifestyle and the unique needs of students in recovery. This training was developed both as the grant's scope of work and the intervention innovation for this dissertation, which is consistent with the action research approach. Action research involves collaboration within the institution of the researcher (Herr & Anderson, 2015).

Participants

The participants were the WDAs, peer educators who are compensated with a free room for their health and wellness support to students in ASU's residence halls. As WDAs live in the residence halls, they work hand-in-hand with ASU Housing staff to increase student engagement in health and wellness programs and events. Viewed by students and staff as positive role models of student well-being, WDAs are expected to deliver presentations on health topics, such as stress or nutrition, to students and classroom audiences. The WDAs create programs for awareness events, such as the Great American Smoke Out, which focuses on quitting tobacco or staying smoke-free. They are responsible for developing materials for a Well Wall bulletin board within their residence halls once a month. These peer educators must maintain a grade point average (GPA) of 2.75 or higher, and they receive ongoing leadership development from their supervisors. The WDAs were trained in a 2-hour Recovery 101 intervention, and four self-selected WDAs interested in continuing working on issues of recovery were trained in the Recovery Ally intervention over the course of one semester.

The participants in this study included 13 WDAs who went through the training in Spring 2018. The WDAs are student leader peer educator undergraduate students at ASU who are selected through an interview and hiring process through the Wellness Office at the Sun Devil Fitness Complex (SDFC). The WDAs are undergraduate peer educators who provide support to ASU students within residence halls and across campus facilities, such as the SDFC, and through collaboration with other student organizations.

The WDAs received approximately 40 hours of training on topics such as alcohol poisoning, substance abuse issues, sexual violence prevention, and the benefits of

physical activity. The first part of my innovation, Recovery 101, of the two-part training made up a portion of their overall 40-hour curriculum. The Recovery 101 training was mandatory; however, participation in the questionnaire for Recovery 101 was made optional to the WDAs. Those who chose to participate in this study had consent explained to them and were given a pre and posttest directly before and directly after the Recovery 101 training. The WDAs were given the option to sign up for the Recovery Ally training, which involved working with me on recovery topics throughout the spring semester. The optional Recovery Ally training included a smaller, self-selected group of WDAs who were especially interested in continuing to learn and increase their skill and competency building for supporting students in recovery. Four WDAs signed up for the second part of the training, which included three 2-hour follow-up sessions over the course of 3 months, one per month during the spring semester. These students participated in a follow-up test at the end of the semester as well. After receiving the 40-hour training, WDAs provide support, information, and resources to other students in their residence hall through hosting information tables, modeling a lifestyle that promotes wellness, and making themselves available to speak with their peers on a variety of relevant issues, such as substance use and mental wellness by placing a "Well Devil Ambassador" sign on their residence hall door.

Role of the Researcher

For the first part of the knowledge-building recovery ally training, Recovery 101, my role was to introduce myself and Recovery Rising, explain the consent process, and distribute the pre and posttest to the WDAs (all 13 chose to participate). The Recovery Rising student employee conducted two 3-minute meditations (one after the pretest and

one before the posttest), and we cofacilitated the PowerPoint lecture. For the second part of the attitude-building recovery training, I acted as moderator to the panel of students in recovery. I then recruited interested WDAs to sign up for Part 2 of the training, called Recovery Ally.

First, the pretest was distributed along with the consent forms. Taking the test was indication of consent, and the WDAs received paper copies of the consent form as well. After the pretest, the student employee led a brief 3-minute meditation. This meditation was intended to provide the WDAs an opportunity to clear their minds, with the hope that they could be more present throughout the training. The CRP student employee and I then delivered the 1-hour PowerPoint lecture, comprised of four sections: (a) the definition and explanation of addiction according to the American Medical Association, (b) the definition and explanation of what recovery from addiction entails from the Substance Abuse and Mental Health Administration (SAMHSA), (c) questions to ask students in recovery to serve in a supportive role, and (d) resources for students in recovery both on and off campus. The first part of Recovery 101 was intended to provide WDAs with knowledge, a necessary step when using theory of planned behavior to guide individuals toward behavior intention.

The second portion of the Recovery 101 training provided the attitude-building piece of the theory of planned behavior model to drive behavioral intention and involved a 1-hour student panel consisting of six students in recovery. These students shared their experience as a college student in recovery, and a 10-minute period for questions and answers was built into that hour. The students in recovery were instructed to share the following at their own level of comfort: (a) why and how they came to begin their

recovery in college; (b) what kind of support from students, faculty, or staff within the college environment was helpful to their recovery; and (c) what words or actions from students, faculty, or staff within the college environment were harmful to their recovery.

I moderated the panel by providing a time limit of 7 minutes to each student on the panel so everyone had a chance to share their story. I kept a timer and held up cards that said “2 minutes” and “End” so they did not go over on their time. Following their stories, WDAs had 10 minutes to ask questions of the panel. The students on the panel called on the WDAs who raised their hands to ask questions. I concluded the panel after the hour had ended. Once the panel concluded, the student employee led the final 3-minute meditation session with the goal of allowing the WDAs a chance to sit with and integrate all the information they had learned. The posttest was then distributed.

After the training, I recruited several interested WDAs who wanted to continue working on recovery efforts throughout the Spring 2018 semester. I stated that there was an additional portion of the training—a semester-long commitment—and that interested WDAs may self-select and sign up with me. I collected their information on a signup sheet and met monthly with them over the course of 3 months. The knowledge of how to speak with students in recovery, as well as recovery resources generated from the Recovery 101 portion of the training, were further developed in the Recovery Ally training. Attitudes developed during the student panel portion of the Recovery 101 training were meant to be enhanced to be more positive toward supporting students in recovery with the self-selected WDAs who chose to participate in the Recovery Ally training.

Recovery Ally training was used to build upon the knowledge and attitudes gained during the Recovery 101 portion and to encourage the WDAs to enhance their behavior intentions by increasing their self-efficacy when providing support to students in recovery. These sessions were designed to help build WDA vocabulary, talking points, and sensitivity when working with students in recovery and developing programming opportunities and events focused on recovery. Self-efficacy skills were meant to be developed, as WDAs were guided to complete a final project focusing on supporting students in recovery, such as a special event or training. The Recovery Ally training convened and concluded with a 3-minute guided meditation session and encouragement for the WDAs to meditate on their own. The WDAs were also encouraged to keep a journal to chronicle their experience, both with meditation and with students in recovery, throughout the semester. Journaling can be a benefit to students as a way to measure progress, think critically, and promote reflection on experiences (Walker, 2006). I did not collect these journals; however, the WDAs were free to share their journaling experience if they felt comfortable doing so.

At the end of the semester, the four WDAs were asked to participate in a qualitative interview about their experience. One of the questions asked of them was to relate self-efficacy to mindfulness practice to determine whether they believed mindfulness impacted their confidence in any way. The question was: “Do you feel your confidence in working to support students in recovery has changed from the beginning of the semester? If yes, do you believe that mindfulness played a role? If no, what are some resources that we could have given you to support you further?”

Intervention

A portion of Governor Ducey's grant to ASU included building a Recovery 101 and Recovery Ally sensitivity training intervention for allies of students in recovery, such as the Well Devil Ambassadors (WDAs). Although an ally training for those in recovery from drug and alcohol addiction does not yet exist, similar sensitivity trainings do exist for allies of individuals who identify as lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ; Worthen, 2011). The LGBTQ sensitivity training called "Safe Zone" helped inform the Recovery 101 intervention. Both are trainings to develop knowledge and attitude change through empathy-building and relational skills, as well as self-efficacy and behavior intention when speaking to or working with individuals who may have unique needs within the college environment, such as students in recovery from addiction.

It may be extrapolated that, by training students to develop compassion and skills in working with diverse individuals, a more empathetic and culturally sensitive environment could emerge as a result of those efforts. For example, from both qualitative and quantitative results of an LGBTQ ally program evaluation study, Worthen (2011) found that student's self-disclosed prejudicial and homophobic attitudes toward LGBTQ students were reduced, and more awareness and tolerance were reported post-training. The goals of the Recovery 101 training were similar because WDAs were trained to build their knowledge base on addiction and recovery, which allowed them to question or perhaps even eliminate preconceived or misinformed ideas about individuals with substance abuse disorders, which could, in turn, allow them to provide better support for students in recovery or considering recovery.

Part 1 – Recovery 101

The Recovery 101 training was scaffolded and structured by a PowerPoint lecture that led students through multiple segments or sections of the training. It had two learning objectives, consistent with the theory of planned behavior. The first objective was to address knowledge- and skill-building through definitions of key terms such as *addiction* and *recovery*. WDAs were taught how to operate as supportive peers within the current college culture, which may be perceived by students in recovery as abstinence hostile by acknowledging that students in recovery may need different types of assistance than those not in recovery. One way to accomplish these goals was to develop WDAs' vocabulary and talking points related to students in recovery. The training included communicating in an effective and sensitive manner when speaking to a self-identified student in recovery, as well as words and phrases to avoid (such as asking, "Why can't you just go out and have one drink?"). Talking points that included questions to ask students in recovery as well as on- and off-campus resources to suggest and recommend were included for this first learning objective.

The second learning objective of Recovery 101 training was to address the attitude change within the theory of planned behavior. For the second hour of Recovery 101, a panel of six students in recovery shared their experience of being a college student in recovery from addiction. The student panel was free to speak about their experience as they wished; however, to maintain a sense of structure, I asked them to share their story of how they decided on a recovery lifestyle and interactions they may have had with other students, faculty, or staff within the college environment that were either helpful or harmful. The intention of this student panel was to create a deeper understanding of what

students in recovery experienced for the WDAs to either enhance an attitude of awareness and support or negate any stereotypes they may have had about addiction and recovery. Table 1 illustrates the basic elements of the Recovery 101 training schedule.

Part 2 – Recovery Ally

The second part of the training was a Recovery Ally follow-up training where four self-selected WDAs signed up for three follow-up sessions over the course of 3 months. The learning objective of this training was to build skills to enhance behavior intention, which, in turn, meant to enhance competence when working with students in recovery. This section of the training was also to develop knowledge, favorable attitudes, behavior intention, and self-efficacy.

The first session of the Recovery Ally training was a train-the-trainer version of Recovery 101. To continue building on their knowledge and self-efficacy, the WDAs were taught how to present Recovery 101 on their own. They were given a hard copy and an electronic copy of the Recovery 101 facilitation guide, a hard copy and electronic copy of the Recovery 101 PowerPoint lecture with a notes section for each slide, and they had an opportunity to ask questions throughout the process. This train-the-trainer Recovery 101 lecture was knowledge-building in that, in learning how to teach the content, the WDAs actually learned the content better. Additionally, the WDAs were given the option to choose to conduct the Recovery 101 lecture as their final project upon the culmination of Recovery Ally (final project described further later in this chapter).

After the train-the-trainer portion of Recovery Ally, I taught the WDAs the basics of mindfulness practice—what mindfulness is and what it is not. They were given tips to continue their mindful experience on their own (meditation, mindful apps, and ways to be

Table 1

Recovery 101 Training Schedule

Recovery 101 Training – 2 hours	
5 minutes	Consent Form: I explained that the Recovery 101 training was mandatory as a part of the WDA job description, but that WDAs can choose to participate in the pre and posttest at their discretion. All 13 WDAs choose to participate and were given a consent form. I explained that taking the test will indicate consent.
7 minutes	Pretest: This pretest tested the knowledge, attitudes, and behavior intention of supporting students in recovery.
3 minutes	Meditation
1 hour	PowerPoint lecture: The PPT lecture was made up of four parts: definitions of relevant vocabulary, social norms within the college environment that may make the college experience difficult for students in recovery, talking points to support students in recovery and resources both on- and off-campus to share
5 minutes	Break
45 minutes	Student Panel: Six students in recovery shared their experiences as a college student finding the recovery lifestyle.
15 minutes	Question and Answer: This was a chance for the WDAs to ask the student panel any questions that they may have.
3 minutes	Meditation
7 minutes	Posttest: All 13 of the WDAs who consented to the pretest were given a posttest directly after the training. I collected them after the training.

mindful in daily activities), as well as suggestions on tools to enhance their practice, such as journals. While not required to keep or submit a journal, the WDAs were encouraged to keep track of their experiences both in self-efficacy, as related to supporting students in recovery, and their experiences in mindful practices (and how these expanded their own sense of efficacy, calm, or confidence, as well as how they shared these with other students through their peer health education practices).

At the end of this session, the WDAs were given a book called *Voices of Recovery From the Campus*: *Stories of and by College Students in Recovery From Addiction* by

Laitman, Lederman, and Silos (2003) to read for next time. This book contains stories written by college students in recovery and was intended to build on the attitudes portion of the theory of planned behavior.

The second session of Recovery Ally involved a discussion on *Voices of Recovery* and whether the book had influenced their knowledge and attitudes toward students in recovery. Talking points included general comments the WDAs had about the stories told in the book, whether the stories were relevant to them during this time in their peer education experience, and whether they felt their attitudes toward students in recovery had shifted in any way after reading this book. This was followed by a discussion of the WDAs' experience with meditation and mindfulness to date and whether their perceived sense of self-efficacy was enhanced since the Recovery 101 training. Finally, the WDAs were given a chance to discuss and plan their final projects and a program planning worksheet to complete individually. The program planning worksheet included questions on the intent of the program or event, as well as the logistics and possible solutions to barriers they may encounter while planning and executing the program or event. They were given the option of completing their final program or event in collaboration with one another or to complete this project individually with no help from the other WDAs.

For the culmination of the 3-month training, the WDAs planned their own recovery-related program or event at ASU. The programs and events were meant to showcase their knowledge, skills, and competence in supporting students in recovery. The behaviors of the WDAs were made visible in this event, thereby giving anecdotal evidence of self-efficacy and behavior intention. The overview of the schedule for this training was as follows (see Table 2).

Table 2

Recovery Ally Training Schedule

Recovery Ally Training – 6 hours	
2 hours	• Meditation • Brief introduction to mindfulness and tools to incorporate mindfulness into daily life, encouragement to journal • Train the Trainer version of Recovery 101 – train WDAs proficiency in Recovery 101 so that they may give the presentation to others. • Gave WDAs *Voices of Recovery from the Campus* book for discussion next session
2 hours	• Meditation • Journal discussion • Discussion of mindfulness practices and the WDA experience with meditation and mindfulness • Book discussion of *Voices of Recovery from the Campus* • Brainstorm of final project ideas to implement next month
2 hours	• WDAs developed and hosted a recovery-focused event/tabling/presentation, either on their own or in conjunction with another WDA

Finally, after the Recovery Ally training, I conducted qualitative interviews with the self-selected WDAs who worked with me over the semester. These interviews lasted between 30 minutes and 1 hour and were guided by the interview protocol in Appendix J. In addition, I administered final follow-up questionnaires to all of the WDAs. These questionnaires were the same as the pre and postquestionnaires and used to measure progress throughout the semester as related to knowledge, attitude, behavior intention, self-efficacy, and mindfulness.

Instruments

In this study, I used a mixed-methods approach by collecting both quantitative and qualitative data. Quantitative data use a deductive top-down approach, starting with a general theory, working theory into a hypothesis, collecting data, and getting the results (a rejection or confirmation) of the data. Qualitative data use an inductive bottom-up

approach, where observations are drawn from patterns and used for a preliminary hypothesis and theory. Polyangulation—"the process of relating or integrating two or more sources of data in order to establish their quality and accuracy" (Mertler, 2014, p. 42)—was a benefit to a mixed method approach to data analysis. Triangulation, or "the inclusion of multiple perspectives" (Herr & Anderson, 2015, p. 68) through the use of mixed-methods data analysis was a way to generate validity and reliability within an action research study. Triangulation through more than one data collection technique and multiple data sources allowed me to check quantitative data against qualitative and vice versa to ensure accuracy of interpretation.

Using quantitative and qualitative instruments helped acquire data that led to a deeper understanding of the effectiveness of implementing recovery training for the WDAs so they may better support students in recovery. The research questions these quantitative and qualitative data answered were:

RQ1: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's knowledge about students in recovery?

RQ2: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's attitudes about students in recovery?

RQ3: How and to what extent does peer educator knowledge and attitudes toward students in recovery influence their behavior intentions toward students in recovery?

RQ4: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's self-efficacy toward supporting students in recovery?

RQ5: How and to what extent does the practice of mindfulness throughout the Recovery 101 and Recovery Ally training affect peer educators?

Quantitative Instrument

The quantitative data were obtained through preintervention, postintervention, and follow-up questionnaires. These questionnaires were informed by existing survey instruments, consistent with the theory of planned behavior (Ajzen, 2013); self-efficacy scales (Bandura, 1990; Gaumer et al., 2016); and the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003; Carlson & Brown, 20015). The theory of planned behavior portion of the survey was used to measure three constructs: knowledge, attitudes, and behavior intention. The constructs of self-efficacy and mindfulness were measured, making up five distinct constructs measured through quantitative means. To reduce survey fatigue, four questions were posed for each construct, making up a total of 20 Likert-type scale questions.

Quantitative instrument: Pre, post, and follow-up questionnaire. The theory of planned behavior (Ajzen, 2013) was described in detail in Chapter 2. The survey based on this measured knowledge, attitude, and behavioral intention related to supporting students in recovery (see Appendix H). The Recovery 101 intervention was designed with these constructs in mind and addressed each of them. The knowledge-building portion of Recovery 101 discussed definitions of addiction and recovery, ways to engage students in recovery in a conversation, and resources on- and off-campus to recommend for further support (e.g., ASU Counseling Services, TreeHouse Learning Community). The second part of Recovery 101 involved a panel of six students in recovery sharing their stories of what life in recovery was like for them and how they navigated the

demands of college life with the demands of their recovery process. This panel was designed to provide WDAs the attitude-building, empathetic portion of the training. As Ajzen (2013) notes, knowledge and attitude taken together can lead to behavioral change. I administered this survey instrument both before and after the training to see how it impacted the WDAs along these constructs. The constructs of knowledge, attitude, and behavior intention were measured in the first three sets of questions on the questionnaire:

Part 1, Knowledge. True or false statements were used to measure knowledge. These questions were a direct reflection of the information presented in the Recovery 101 PowerPoint lecture, such as True or False: "Addiction is a brain disease." Students had the option to answer "I don't know" within this portion of the questionnaire.

Part 2, Attitude. The WDAs were asked to respond on a 4-point Likert-type scale with 1 = *strongly disagree* to 4 = *strongly agree* on statements such as, "I have the right/ability to diagnose another student with alcoholism or addiction," and "I consider myself a 'Recovery Ally.'"

Part 3, Behavioral Intention. For Part 3 of the questionnaire, a 4-point Likert-type scale (1 = *very unlikely* to 4 = *very likely*) was used to assess behavioral intentions of the WDAs postintervention. They were asked to answer a series of questions beginning with, "How likely or unlikely are you to . . . attempt to convince another student that they have an alcohol or drug problem?"

Self-efficacy scales. The construct of self-efficacy is generally quantified on a confidence Likert-type scale and measures how one judges oneself when setting and achieving goals, as well as how likely one would be to bounce back and persist after a setback toward achieving that goal (Bandura, 1990; Gaumer et al., 2016). Self-efficacy is

a determinant of how likely one is to engage in a behavior. If one feels they are efficacious toward a certain task, they are more likely to engage in that task. It stands to reason that the more efficacious a WDA is toward having knowledge and understanding, conversing, sharing resources, and feeling empathetic, the more likely they would be to support a student in recovery, given the opportunity. Self-efficacy was measured using a Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree).* Questions included, "Once I've decided to accomplish something that is important to me, I keep trying to accomplish it, even if it is harder that I thought," and "I believe hard work pays off."

Mindful Attention Awareness Scale. As noted in Chapter 2, the practice of mindfulness can lead to enhanced self-efficacy (Bohecker & Doughty Horn, 2016; Pipe et al., 2009). There are many scales used to measure mindfulness; however, the MAAS is simple to understand, and one does not need a background in mindful practices to answer the questions on the scale. The MAAS has also been shown to have reliability and validity when gathering data from college students (Brown & Ryan, 2003; Carlson & Brown, 2015). The MAAS is a 15-point scale built to measure how one assesses their mindfulness, or "a receptive state of mind in which attention, informed by sensitive awareness of what is occurring in the present, simply observes what is taking place" (Brown & Ryan, 2003, p. 1). Mindfulness was measured using the MAAS Likert-type scale (1 = *strongly disagree* to 4 = *strongly agree),* and questions included, "I find it difficult to stay focused on what's happening in the present," and "It seems I am running on automatic, without much awareness of what I am doing."

Qualitative Instrument: Post and Follow-Up Questionnaire

Qualitative questions were presented in three different places: the posttest following the Recovery 101 training, the follow-up for all WDAs at the end of the semester, and in an interview given to the four self-selected WDAs who chose to participate in the Recovery Ally training. The posttest following Recovery 101 measured the short-term intervention, and the follow-up test measured the lasting effect of the Recovery 101 training. As the tests were anonymous, there was no way to measure the difference between the four self-selected students who worked on the Recovery Ally training and the rest of the WDAs who only participated in Recovery Ally.

The construct of attitude and behavior intention was measured qualitatively using two short-answer questions in the posttest following the Recovery 101 training, as well as in the follow-up questionnaire following the end of the Spring 2018 semester. The question for the posttest was: "Do you plan to be a 'recovery ally'? If so, how will you support students in recovery?" The question for the follow-up test at the end of the semester was: "Do you consider yourself a 'recovery ally'? If no, why not? If so, why?" These questions served to measure whether the knowledge- and attitude-building portions of the training led to behavioral intentions toward supporting students in recovery.

Additionally, the four self-selected WDAs who continued on with me for the Recovery Ally training were given a qualitative interview at the end of the semester. The five constructs of knowledge, attitude, behavior intention, self-efficacy, and mindfulness were measured. The interview questions were guided by a semi-structured interview protocol; each interview lasted approximately 30 minutes to 1 hour. The questions were aimed at understanding how the Recovery 101 and Recovery Ally training impacted the

WDAs in the constructs of knowledge, attitude, behavior intention, self-efficacy, and mindfulness. The interview protocol is provided in Appendix J.

Procedure

The WDAs were all required to attend and participate in a 40-hour training in health and wellness topics related to college students as part of their job requirements. This training was broken up into two parts, one in the beginning of the fall semester and one at the beginning of the spring semester. As addiction and recovery are relevant topic areas for the college population, one of the mandatory components of the training was the Recovery 101 innovation. While the Recovery 101 training was mandatory, the pre, post, and follow-up test were not; therefore, the WDAs could have opted out of participating in this study, although none chose that option. Recruitment of the WDAs for this study occurred directly before the Recovery 101 section of the training so they had a chance to decide if they wanted to participate. Consent forms (see Appendix G) were handed to all WDAs, as all chose to participate, and I noted that participation in the pre and posttest was an indication of consent.

The recruitment for Part 2 of the innovation, Recovery Ally, occurred at the end of the training, where I made an announcement to the students that if they participated in the pre and posttest and were interested in continuing to work on recovery-related topics with me for the rest of the Spring 2018 semester, they could choose to opt in to the Recovery Ally training (consent form in Appendix I). The four interested students were directed to list their names and email addresses on a sheet, and I contacted them with meeting information within 1 week of the Recovery 101 training.

Recovery 101. Recovery 101 was a 2-hour portion of the WDAs' overall health and wellness training curriculum. The intervention began with a preintervention paper-and-pencil survey that collected knowledge, attitude, behavior intention, self-efficacy, and mindfulness measures from each participant. This survey took less than 10 minutes to complete. Following the survey, the WDAs received the PowerPoint lecture piece of the intervention cofacilitated by me and a student worker of the CRP. Not leading the training myself, but rather cofacilitating, accounted for potential confirmation bias.

Following the lecture and a 5-minute break, a panel of six students in recovery shared their experiences in college with addiction and recovery. The WDAs then had a chance to ask the panel questions. This discussion allowed the WDAs to talk with their peers and hopefully gave them a chance to think about how they perceived their ability and self-efficacy with respect to providing support for the students in recovery. The student panel allowed for a groundwork of openness for the discussion with the WDAs, as students generally accept and respond to information and life experiences from those who are like them, which is why peer-to-peer engagement was vital to create support and understanding around sensitive topics, such as addiction and recovery (Newton & Ender, 2010). My involvement with this discussion was minimal, as I acted as moderator rather than participant. After the discussion concluded, the postintervention survey (the same questions as the preintervention survey plus one short answer qualitative question) was administered and collected.

Recovery Ally. The Recovery Ally training included four self-selected WDAs who wanted to develop their skills and efficacy in working with students in recovery. The training timeline is illustrated in Table 3. This first part of the training involved a train-

the-trainer version of Recovery 101, where I trained the WDAs to present the PowerPoint on their own. The WDAs were given a hard and soft copy of the PowerPoint, lecture notes, and a facilitation guide so they had the option of presenting the information themselves. During this first session, WDAs also received a copy of the book, *Voices of Recovery From the Campus: Stories of and by College Students in Recovery From Addiction,* by Laitman et al. (2003). This book is a collection of narratives from college students at Rutgers University about their college experiences in active addiction and subsequent recovery. Similar to the student panel part of the Recovery 101 training, having the WDAs read *Voices of Recovery* was an effort toward attitude development and a greater understanding toward students in recovery.

The second session of the Recovery Ally training involved a facilitated discussion about the book. The reading of the book and the subsequent discussion gave the WDAs an inside glimpse of how college students experience their recovery and reinforced the stories from the student panel that were presented to them during Recovery 101. The discussion was in a closed environment for WDAs to share their thoughts and ask questions of both me and each other.

The third portion of the Recovery Ally training was the culmination of the knowledge gained about recovery during the semester. The enactment of the knowledge was in the form of an event, training, or tabling activity they planned together or on their own to spread awareness of recovery. This was the "test" of knowledge and skills gained postintervention. Finally, the qualitative questions about their experience measured knowledge, attitude, behavior intention, self-efficacy, and mindfulness through an

Table 3

Timeline of Training

Timeline	
January	Pretest survey was distributed before the Recovery 101 training
	Recovery 101 training
	Posttest survey was distributed after the Recovery 101 training
	Recruitment for four interested WDAs to participate in follow-up Recovery Ally training
January	Held monthly session of Recovery Ally training
February	Held monthly session of Recovery Ally training
March/April	Final "test" of the four self-selected WDAs – the completion of a program or event focused on supporting students in recovery Qualitative interviews of the four self-selected WDAs following completion of their final project Follow-up survey distributed after completion of the Recovery Ally training

interview concluding the Recovery Ally training at the end of the semester. IRB approval for this project is included in Appendix L.

Data Analysis

The research questions were analyzed separately using a mixed-methods approach using both quantitative and qualitative data analyzation techniques. The data were then brought together for further analysis and points of comparison or differentiation. In the following section within this chapter, I describe the data analysis procedures.

Quantitative Data

The quantitative data were collected from the Likert-type scales on the pre, post, and follow-up survey instruments and analyzed using descriptive statistics. Descriptive statistics are a means of summarizing the data through the description of the sample's

scores (Woolley & Benjamin, 2004). The analysis focused on frequency scores and determined if the group average of the constructs measured changed from pre to post to follow-up survey, thereby indicating whether the WDAs' knowledge, attitude, behavior intentions, and self-efficacy were impacted by the Recovery 101 and Recovery Ally trainings.

Qualitative Data

The qualitative data were collected from three different sources: the short answer questions from the post and follow-up test, and qualitative interviews. To understand the qualitative data obtained from the short-answer results, I coded the answers by hand to gather larger thematic data. The answers for both post and follow-up were relatively short (about one sentence for each participant, each test); therefore, the analysis was simple to complete by hand without using qualitative analysis software. The results from the short answer questions are presented in Chapter 4.

To understand the qualitative interviews, I used HyperRESEARCH software, an electronic process of coding and sorting data. I conducted two separate cycles of coding using two different approaches. These coding methods are presented here.

Coding method of short-answer questions. The postsurvey short-answer qualitative question was, "Do you plan to be a Recovery Ally? If so, how will you support students in recovery?" The follow-up short-answer qualitative survey question was, "Do you consider yourself a Recovery Ally? If no, why not? If yes, why?" These questions were intended to promote behavior intention for the WDAs. My hypothesis was that most participants would respond positively to both questions, and setting their intention to engage in positive behavior was likely to encourage them to act on the

behavior (Ajzen, 1991). As the responses for both questions were about one sentence each, I read and re-read them to look for patterns in the data. The thematic results of the short answer questions are described in Chapter 4.

Coding Cycle 1, Method 1. I first transcribed the four open-ended interviews. I began by reading and re-reading the data to familiarize myself with the content. To begin the coding process, I went back to the reference sheet to determine which interview questions corresponded with which research question (see Appendix K). I eliminated the first question from the coding procedure, as this first question was a warm-up to get the participant comfortable. I used the Word Counter tool to determine the key words that were visible in the data. The Word Counter tool converted the 100 most often-used codes into a Word Cloud. I then deleted words, such as "and," "like," and "the," as these were not relevant for the data analysis. This Word Cloud is shown in Figure 5.

From this word count, I created my first codes. I then inputted those codes into HyperRESEARCH software and open-coded the data line by line. This initial cycle of coding produced 37 codes. I used thematic coding as an initial procedure. Appropriate for almost all qualitative research, Saldaña (2009) recommends this method as a first step in the coding cycle to find overarching concepts, ideas, and phrases from different data sources to create key themes.

Coding Cycle 1, Method 2. I used code mapping to transition from the first method to the second. Code mapping is an efficient way to organize and assemble codes (Saldaña, 2009). The set of codes was condensed into categories to determine the larger picture within the data. Because the research questions were divided by five categories (knowledge, attitude, behavior intention, self-efficacy, and mindfulness), I took these

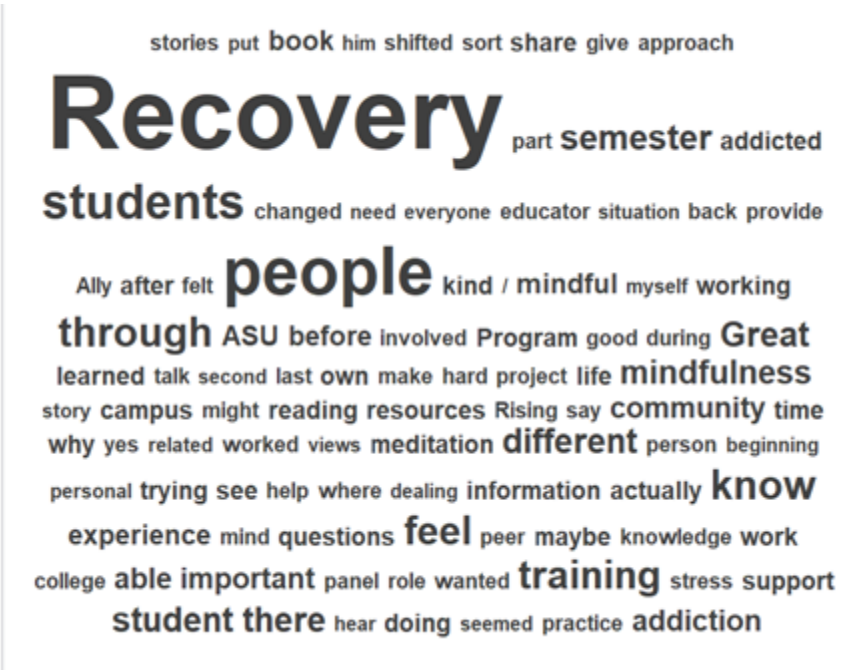

Figure 5. Word cloud for Coding Cycle 1, Method 1.

categories to inform and develop key themes. For example, all of the participants noted that their focus improved after a meditation session during the Recovery Ally training; therefore, "focus" was under the "mindfulness" theme. I then coded all of the four interviews according to the five themes. I used a line-by-line open coding approach in HyperRESEARCH to identify the themes. This coding cycle allowed me to become acquainted with the data; however, to further understand the data, I opted to conduct a second cycle of coding with two methods within the cycle.

Coding Cycle 2, Method 1. To begin the second cycle of coding, I wanted to condense my list of codes. Whereas I created 36 codes for the first cycle, I narrowed the list down to 30 codes for the second cycle and then analyzed these codes into units of meaning, or "clusters of text that carry one meaning" (Koro-Ljungberg, 2017). I identified the meaning units by in vivo codes in the text of the transcribed interviews and viewed the range of meanings within the responses. Before moving on to the second

method, I ran a frequency report to see how many times the meaning units came up in HyperRESEARCH. These 30 units were then converted into a Word Cloud. This Word Cloud is shown in Figure 6. The Word Cloud presented an opportunity to move on to the second method of coding within this cycle.

Coding Cycle 2, Method 2. For the final method of coding, I proceeded with the codeweaving method. Codeweaving is the process of "weaving" phrases and concepts into a narrative format (Saldaña, 2009). The purpose of doing this is to see how the codes, themes, and narrative goes together in a cohesive whole. For this level of analysis, I began to create a narrative around the coded meaning units. Several themes were made visible through the coding and recoding process. A thematic analysis of the data is presented in the Chapter 4.

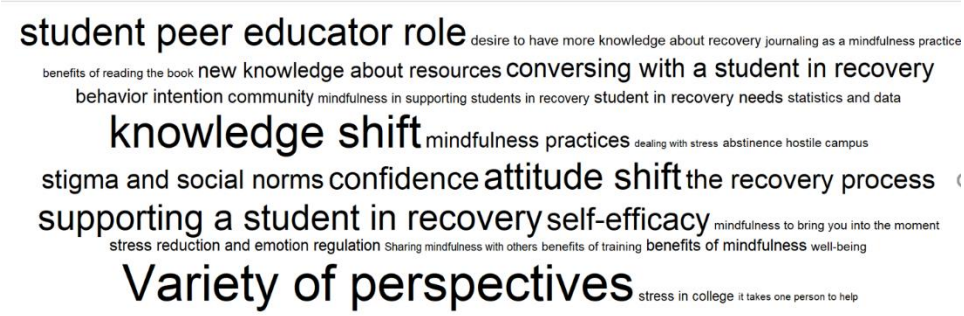

Figure 6. Word cloud for Coding Cycle 1, Method 2.

CHAPTER 4

DATA ANALYSIS AND RESULTS

In Chapter 4, I review the analysis and results of the data collected throughout the Spring 2018 semester. This research project was guided by the following research questions:

RQ1: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's knowledge about students in recovery?

RQ2: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's attitudes about students in recovery?

RQ3: How and to what extent does peer educator knowledge and attitudes toward students in recovery influence their behavior intentions toward students in recovery?

RQ4: How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's self-efficacy toward supporting students in recovery?

RQ5: How and to what extent does the practice of mindfulness throughout the Recovery 101 and Recovery Ally training affect peer educators?

In this mixed-methods study, I collected quantitative and qualitative data to answer these research questions. Results for the study are presented in three sections. The quantitative data are reported first, followed by the qualitative data.

The quantitative data included pre, post, and follow-up surveys from the Recovery 101 training. The pre and postsurvey was administered in January 2018 before and after the 2-hour Recovery 101 training. The survey measured five constructs (knowledge, attitude, behavior intention, self-efficacy, and mindfulness) that aligned with

the research questions. The follow-up survey was administered in April, at the end of the semester. All surveys were distributed to 13 WDAs. All 13 completed the pre and postsurveys, while only nine completed the follow-up survey. The results from the quantitative data were analyzed using SPSS software descriptive statistics.

Qualitative data included short-answer responses from the post and follow-up survey, as well as results from four open-ended qualitative interviews conducted following the Recovery Ally training. There were no qualitative questions for the presurvey. The post and follow-up survey qualitative questions were coded by hand using thematic analysis (Strauss & Corbin, 1998). The bulk of qualitative data were collected via interviews, and these were used to measure the five constructs of knowledge, attitude, behavior intention, self-efficacy, and mindfulness following the Recovery Ally training. As four WDAs completed the Recovery Ally training, interview data were collected from each one after the training. All interviews were conducted in April and lasted approximately 30-60 minutes each. The results from the qualitative data were transcribed verbatim, analyzed for word count and recurring themes using HyperRESEARCH software, then by hand. The qualitative results section breaks up the main ideas into themes, or patterns, within the data. Themes are further funneled down into subthemes, which are categories within each theme. Assertions, or the researcher's analysis on the presented data, are then stated.

The following Results section is broken up by each research question individually. The results for each research question are described first quantitatively and then qualitatively. Both the quantitative and qualitative data are then summarized to formulate a description of mixed-methods results.

Results

Summary of Recovery 101 and Recovery Ally Training

The Recovery 101 intervention was held for all 13 WDAs in a 2-hour time block during the mandatory WDA winter training in January 2018. Quantitative data were collected from all students in one presurvey before the training, one postsurvey after the training, and one follow-up survey at the end of the Spring 2018 semester.

During the Recovery 101 intervention, I recruited four WDAs who were especially interested in learning more about how to support students in recovery from addiction. These four WDAs volunteered to participate in the Recovery Ally training. This training entailed three separate sessions totaling 2 hours each during which the WDAs would receive a train-the-trainer version of Recovery 101, participate in a book discussion, learn about mindfulness and meditation, and produce a final project in which they engaged in supportive behavior for students in recovery at ASU. A detailed description of the training intervention is presented in Chapter 3.

Qualitative research was conducted after the four WDAs completed their final project. The final project was one of their own choosing, where they had the opportunity to create the project either by themselves or together. Two WDAs, referred to as Participant 1 and Participant 2, chose to complete the project together. They decided on an outdoor tabling event at a heavy foot traffic intersection on campus where they would set up giveaways (water bottles with the Recovery Rising logo), as well as notecards and envelopes. This event was called Letters to Recovery. Passerby students who stopped by the table were encouraged to write a letter to someone in recovery, whether they knew an individual in recovery personally or not. Participants 1 and 2 saw this awareness event as

an opportunity to spark conversations on what it really means to be in recovery and how to be sensitive to those in recovery. The WDAs collected dozens of letters to people in recovery, which were then used as giveaways at a larger event led by Recovery Rising.

Participants 3 and 4 chose to produce individual projects. Participant 3 also chose an outdoor tabling event in a heavy foot traffic area on campus. The focus of this event was promoting social norms and reducing stigma toward students in recovery. This WDA created notes with messages, such as "Recovery is never easy but we've got resources to help," which she taped to giveaways such as the Recovery Rising water bottles. This WDA engaged students passing by in conversation and told them about the statistics learned from the Recovery 101 training, such as the fact that 40% of ASU students choose not to drink alcohol (ACHA-NCHA, 2016).

Participant 4 opted to create a Well Wall within her residence hall. Well Walls are bulletin boards, generally at the entrance of residence halls, which the WDAs are responsible for maintaining and updating every month with various health topics. For the month of April, this WDA chose to post information about recovery on the Well Wall. This WDA drew a "pathway roadmap" of recovery through the stages of change (precontemplation, contemplation, planning, action, maintenance, relapse), which was information that was taught in the Recovery 101 training with statistics from ACHA-NCHA and quotes from the book, *Voices of Recovery From the Campus*, scattered throughout the Well Wall. The background of the roadmap was ASU's Recovery Rising program surrounded by the WDAs' hand-drawn illustrations of local resources, such as the health center on campus.

Organization of the Results

The results of both the quantitative and qualitative data are presented in five sections according to the research questions. To answer RQ1, the results of the training on the WDAs' knowledge are explained; RQ2 results investigate how the training informed WDAs' attitude; and RQ3 investigates how WDAs' knowledge and attitude inform behavior intentions toward students in recovery from addiction. RQ4 describes how the training informed WDAs' self-efficacy, while RQ5 examined how the practice of mindfulness during the training affected the WDAs. Following the description of the quantitative and qualitative results, the mixed-methods results are triangulated. The triangulation of quantitative and qualitative data aims to provide a larger picture of both methods combined.

Results for Research Question 1: How and to What Extent Does Recovery 101 Training Inform Peer Educator's Knowledge About Students in Recovery?

Quantitative data sources included true/false and Likert-type scales on the pre, post, and follow-up surveys. Qualitative data sources included four qualitative interviews. The quantitative data results are presented first, and the qualitative data results are presented subsequently.

Quantitative results. The quantitative data gathered and analyzed for the results of RQ1 were derived from three sources: the pre, post, and follow-up survey instrument. Survey Questions 1-4 measured the knowledge construct to determine how participation in the Recovery 101 training informed the WDAs' knowledge about students in recovery. The knowledge-building portion of Recovery 101 defined addiction and recovery, ways to engage students in recovery in a conversation, and support resources on and off

campus. Given the small sample size (n = 13) and the mix of true/false and Likert-type scale questions, the analysis was limited to frequency scores to determine the training impact during the stage of pre to postsurvey, and again from post to follow-up survey. Data were analyzed using SPSS statistical software.

Table 4 relays the response frequencies of the pretest questions measuring the knowledge construct. The correct answers are in bold. These frequencies were measured to have a baseline point of knowledge before the training. The responses indicate that the WDAs had an above average knowledge of addiction and recovery pretraining, perhaps due to the previous mandatory 40-hour training they received in the fall semester, which included information about substance use and misuse. For example, a majority of WDAs (84.6%) knew that 40% of ASU students choose not to drink alcohol and more than half (53.8%) knew that addiction is a chronic, relapsing disease. Additionally, 84.6% knew it was not their responsibility to label another student as an addict or alcoholic, and 76.9% knew, or made an educated guess, what Recovery Ally meant. Having been working as peer educators for at least a semester, it is not remarkable that these answers indicate a prior knowledge and understanding of institutionally relevant statistical information related to their jobs.

Table 5 denotes answers from the posttest, which was distributed immediately after the Recovery 101 training. The correct answers are in bold. These results indicate that knowledge was gained from the Recovery 101 training within the following areas: (a) more WDAs learned that 40% of ASU students choose not to drink alcohol (from 84.6% in the pretest to 92.3% in the posttest); (b) all WDAs learned what a Recovery

Table 4

Pretest Response Frequencies (Knowledge Construct)

Question (Level of Agreement)	True	False	Don't Know
Indicate your level of agreement with the following statements.			
Q1. If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict.	7.7%	**84.6%**	7.7%
Q2. 40% of ASU students choose not to drink alcohol.	**84.6%**	15.4%	0.0%
Q3. "Recovery Allies" are people who might not be in recovery themselves, but they support students in recovery.	**76.9%**	0.0%	23.1%
Q4. Addiction is a chronic, relapsing disease.	**53.8%**	15.4%	30.8%

Note. $n = 13$.

Table 5

Posttest Response Frequencies (Knowledge Construct)

Question (Level of Agreement)	True	False	Don't Know
Indicate your level of agreement with the following statements.			
Q1. If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict.	15.4%	**84.6%**	0.0%
Q2. 40% of ASU students choose not to drink alcohol.	**92.3%**	7.7%	0.0%
Q3. "Recovery Allies" are people who might not be in recovery themselves, but they support students in recovery.	**100.0%**	0.0%	0.0%
Q4. Addiction is a chronic, relapsing disease.	**84.6%**	15.4%	0.0%

Note. $n = 13$.

Ally meant (100%); and (c) the majority understood that addiction is a chronic, relapsing disease (from 53.8% pretest to 84.6% posttest).

Although the correct answer ("false") for Q1 remained the same in both pre and posttest (84.6%), more WDAs chose "true" (15.4%) instead of "don't know" (0%)—shifting from not knowing to the wrong answer. An example of this is one WDA (Kri7923), who answered "false" in the pretest, which was correct, but "true" in the posttest, which was incorrect. Perhaps the reason for this shift was because it was never

explicitly stated in the training that individuals who experience problems with alcohol or drug addiction should come to the understanding of themselves as "addicts" or "alcoholics" on their own, and that it is not the responsibility of others to make that determination for them. Maybe Kri7923 misunderstood the purpose of the training and believed Recovery 101 to be a way to figure out who is an addict or alcoholic. Also accounting for the incorrect answer was Ren2073, who answered "true" (incorrect) in both pretest and the posttest. For Ren2073, this might indicate that this was an area where misconceptions that exist are stubborn. However, the majority of WDAs understood that it was not their responsibility to "know" someone is an addict or alcoholic. One WDA (Jo0923) who did not know in the pretest gained knowledge for the posttest. Jo0923 answered "don't know" in the pretest and "false" in the posttest, moving from not having knowledge to displaying correct knowledge.

The response frequencies from the follow-up test are illustrated in Table 6. Only nine out of the 13 WDAs responded to the follow-up test, perhaps due to the timing of the distribution at the end of the semester, a busy time of year for many students. Results from the follow-up survey indicated that the responses did change from the beginning of the semester when the posttest was distributed. Response frequencies increased to 100% correct on Q2 and Q4 (from 92.3% and 84.6% on the posttest, respectively), indicating that, although 3 months had elapsed from the posttest to the follow-up test, most of the WDAs retained—and some even gained—the knowledge throughout the semester.

This rise in correct answers to Q2 and Q4 could have been due to the WDAs' continued interactions with other students in their role as peer educators within the residence halls. Although the WDAs were not asked to share their interactions within the

Table 6

Follow-Up Test Response Frequencies (Knowledge Construct)

Question (Level of Agreement)	True	False	Don't Know
Indicate your level of agreement with the following statements.			
Q1. If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict.	11.1%	**88.9%**	0.0%
Q2. 40% of ASU students choose not to drink alcohol.	**100.0%**	0.0%	0.0%
Q3. "Recovery Allies" are people who might not be in recovery themselves, but they support students in recovery.	**77.8%**	11.1%	11.1%
Q4. Addiction is a chronic, relapsing disease.	**100.0%**	0.0%	0.0%

Note. $n = 9$.

scope of their job, working as peer educators in the residence halls could have involved anything from day-to-day conversation to collaborating with residence hall staff in cases of alcohol use and disorderly conduct. Interactions like these could have broadened the WDAs' breadth of expertise of substance use issues, which, according to the theory of planned behavior, could have influenced their knowledge and attitudes (Ajzen, 1991).

WDAs chose 100% correct answers on Q2 and Q4, but not on Q1 and Q3. The only one who answered Q1 incorrectly was Kat1593, who must have chosen a different identifier in the pre and posttests, as the follow-up test was the only place where this identifier showed.

Two WDAs gained knowledge for Q1 on the follow-up test. For example, Ren2073 answered Q1 incorrectly ("true") in both pre and posttest, but ended up answering correctly ("false") in the follow-up. Also, Kri7923, who answered Q1 correctly on the pretest and incorrectly on the posttest, ended up going back to their original correct answer (false).

Additionally, the correct answer ("true") for Q3 fell from 100% posttest to 77.8% in the follow-up test. In both the pre and posttest, Kri7923 answered correctly, but incorrectly on the follow-up, denoting that they did not retain this piece of information.

Qualitative results. The data gathered and analyzed for the results of RQ1 were from two qualitative interview questions: "The first session of the Recovery Ally training this semester involved a train-the-trainer version of Recovery 101. Tell me what you learned from this training," and "The second session of the Recovery Ally training involved a book discussion. Tell me what you learned after reading the book *Voices of Recovery from the Campus,* and do you think your knowledge of students in recovery has shifted in any way after reading and discussing this book?" The themes, assertions, and theme-related components listed next illustrate the qualitative results, which align with the quantitative data in that knowledge about addiction and recovery was enhanced after the training.

Theme 1: WDAs gained communication skills. *Assertion 1: From the train-the-trainer version of Recovery 101, the WDAs gained a sense of how they can support students in recovery through their communication.* Data collected from the qualitative interviews indicated that the train-the-trainer portion of Recovery Ally allowed the WDAs to gain knowledge in communication skills, such as empathetic listening. A main learning objective in Recovery Ally training was to provide the WDAs with a greater knowledge of communication skills to support students in recovery.

Subtheme 1a: The train-the-trainer version of Recovery 101 helped the WDAs define and improve their communication skills to best support students in recovery. The instruction of communication skills within the Recovery 101 training (i.e., words to

include and exclude, listening without judgment, and questions to ask while speaking with students in recovery) provided the WDAs with a framework for enhancing their communication.

Participant 1 noted, "Being able to connect with the people you're trying to educate is one of the most important principles," while Participant 2 stated that the train-the-trainer version of Recovery 101 gave her a way to anticipate the questions that may be asked by a student in recovery, stating that the training gave her the means for "thinking forward and trying to anticipate the sort of questions that people [in recovery] would ask." Participant 3 said the training showed her that, when talking to students in recovery, "it is important to remember to try your best and provide resources." Participant 4 appreciated the "open-ended" approach of talking to students in recovery "instead of lecturing everyone on what the true definition [of recovery] is." The answers to the interview questions indicated that all four WDAs had begun to think about communicating with students in recovery so they could better connect with them. The way they indicated they would support students in recovery is through verbal connection (answering questions and engaging in open dialogue) and providing resources.

Theme 2: WDAs gained knowledge. *Assertion 2: From reading* Voices of Recovery From the Campus*, the WDAs gained knowledge that many students in recovery share a similar background story (i.e., a personal background and/or family history of addiction).* Data collected from the qualitative interviews with the four WDAs who participated in the Recovery Ally training indicated the book and subsequent discussion helped them to gain knowledge of the background stories of students in recovery, thus broadening their perspective on where a student in recovery is coming from.

Subtheme 2a: The book Voices of Recovery From the Campus *contained similar stories of students in recovery*. The most frequently reported statement from the WDAs about the knowledge gained from *Voices of Recovery From the Campus* was that many students in recovery have a similar background story. Personal stories within the book illustrated various roads to recovery; however, a main theme the WDAs noticed was that every story had a family history component to it. For example, Participant 1 stated, "I thought it was really interesting the pattern that came out of the stories, how people's past experiences led them to their addiction," while Participant 2 relayed, "I think the overall takeaway I got from the book was . . . the dichotomy of every student experience is different but they all have similar themes and they can follow a similar arc." As noted in Chapter 2, research has found that young adulthood is often considered the "drinking years" for some individuals (Schulenberg & Maggs, 2002). Whether due to stress or transitions, past experience with alcohol was clearly described in the students' stories within the book. The WDAs picked up on the similarities of the unhealthy coping mechanisms listed in these stories. Continuing along those same lines, Participant 3 stated:

> One thing that stood out to me was personal and family history. A lot of the cases that were in the book had to do with individuals who grew up in an environment that was drinking intensive . . . it was very interesting to see how a family dynamic affects them.

Participant 4 shared that, before reading the book, she "didn't see the whole picture of what that [recovery] entailed and what their backgrounds might look like." Taken together, the data indicate that the WDAs did gain knowledge from reading the book *Voices of Recovery From the Campus*, which showed them that many students in

recovery share similar stories regarding past experience and/or family history of addiction and recovery.

Theme 3: WDAs gained awareness. *Assertion 3: Reading the book* Voices of Recovery From the Campus *brought awareness to the fact that the WDAs may not be able to immediately recognize a student in recovery.* Assertion 3 indicates an outcome of the knowledge gained from the train-the-trainer version of Recovery 101 and reading the book *Voices of Recovery From the Campus* generated a greater awareness and sensitivity to recognizing that students in recovery may be all around the WDAs and they may not know it.

Subtheme 3a: Personal stories revealed students in recovery may be indistinguishable from the general student population (i.e., one may not be able to tell if a student is in recovery). The knowledge gained from the train-the-trainer version of Recovery 101 and reading the book brought about a greater awareness of—and sensitivity to—students in recovery. As students in recovery may not be immediately noticeable to the WDAs, the awareness that they could potentially be anyone led to a greater sensitivity and a greater mindfulness of their own actions.

When discussing the book, Participant 1 stated, "I recognize now that people in recovery sort of blend in with other students and so do students going through addiction . . . so it's hard to tell that someone is struggling under a condition like that." Participant 2 echoed this statement, saying, "The thing that stands out most that has been added to my knowledge . . . is that the students in recovery or even actively dealing with addiction, you might not notice it on the outright," further saying that there might be "a student in recovery under your nose and not knowing it." These responses suggest an inconsistency

to the responses on Q1 in the quantitative test ("If a student tells me that they are having problems due to alcohol or drug use, I know they are an alcoholic or addict"). Q1 answers revealed a stubborn bias in some WDAs "knowing" that another student is an addict if they admit to substance use problems. The WDAs' answers to this qualitative question, which all pointed to a new realization that a student could be in active addiction or recovery and they may not even recognize it, revealed a newfound insight as a result of reading *Voices of Recovery From the Campus*.

Participant 3 went on further to say that the awareness of knowing that students in recovery may be around them led to a greater awareness of their own actions: "Understanding that people around you could be in recovery and that little things like saying, 'Hey are you going out tonight?' could be a trigger for them and being more conscious of the [recovery] community." Participant 4 noticed that seeing the stories unfold in the book illustrated that people in recovery may not "fall into the stereotypes," which allowed for a greater "open-mindedness" and a responsibility to "be more mindful of other people's situations and what they can be going through." Participant 4 went on to say that the training brought awareness to that which she "never thought about before," such as, "Everyday things that I didn't even think about, like maybe you have a roommate who is going through recovery, and you're shaking the bottles when you're taking your birth control, how that can be a triggering sound." A greater mindfulness to students in recovery emerged, also consistent with quantitative results from the mindfulness construct.

Summary of quantitative and qualitative results for Research Question 1.

Although response data for one question in the knowledge construct in the quantitative

test ("If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict") show a stubborn resistance to knowledge gains in a small percentage of WDAs, the majority responded with strong baseline and enhanced knowledge in all areas.

As there was growth in learning illustrated in the quantitative data, so too did the qualitative data indicate an enhanced knowledge with relation to resource sharing, communication, and empathetic listening skills. Going through the training allowed the WDAs to recognize similar storylines throughout the stories and backgrounds of students in recovery. Also expressed was a greater alertness of the potential for students in recovery to be in the presence of WDAs without them realizing it. Finally, within the qualitative data, a quality of greater mindfulness was interspersed throughout the WDAs' answers.

Results for Research Question 2: How and to What Extent Does Recovery 101 Training Inform Peer Educator's Attitudes About Students in Recovery?

Quantitative and qualitative data were collected and analyzed to answer RQ2. Quantitative data sources included true/false and Likert-type scales on the pre, post, and follow-up surveys. Qualitative data sources were derived from four qualitative interviews. The quantitative data results are presented first followed by the qualitative data results.

Quantitative results. The quantitative data gathered and analyzed for the results of RQ2 were derived from three sources: the pre, post, and follow-up survey instrument. Survey Questions 5-8 measured the attitude construct to determine how participation in the Recovery 101 training informed the WDAs' attitudes about students in recovery. An

objective of Recovery 101 training was to create an awareness of what students in recovery experienced and to address the attitude change within the theory of planned behavior. To this end, a student panel shared their experience of being a college student in recovery from addiction in the second hour of Recovery 101. Quantitative data frequencies analyzed through SPSS are described below.

Table 7 relays the response frequencies of Q5 through Q8, questions that were intended to measure WDAs' attitudes toward supporting students in recovery. The correct answers are in bold. This Likert-type scale measured a range of responses from *strongly disagree* to *strongly agree*. The majority of students either strongly disagreed (38.5%) or disagreed (61.5%) to Q5, that they had the right or ability to diagnose another student with alcoholism or addiction, indicating that none of the WDAs felt it was in their hands to label another student.

More than half (53.8%) agreed that most ASU students do not drink "too much" alcohol, while 38.5% disagreed. This was an interesting response, considering 84.6% answered that only 40% of ASU students drink alcohol (Q2 in the knowledge portion of the pretest), indicating that knowledge did not necessarily line up with attitude.

According to Ajzen (2005), attitudes are reflective of values or beliefs. While subject to fluctuation, knowledge about a subject may not be enough to change a deeply held opinion. This theory could be the explanation for dissonance between knowledge and attitude, and therefore, in similar trainings, it may be worth spending more on time on attitude shifts. The majority of WDAs (69.2% agree and 15.4% strongly agree) considered themselves a Recovery Ally, and the majority either strongly disagreed

Table 7

Pretest Response Frequencies (Attitude Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statements.				
Q5. I have the ability/right to diagnose another student with alcoholism or addiction.	**38.5%**	**61.5%**	0.0%	0.0%
Q6. In reality, most ASU students don't drink too much.	0.0%	38.5%	**53.8%**	**7.7%**
Q7. I consider myself a "Recovery Ally."	0.0%	15.4%	**69.2%**	**15.4%**
Q8. People who are addicted to a substance can stop drinking whenever they want.	**61.5%**	**30.8%**	7.7%	0.0%

Note. $n = 13$.

(61.5%) or disagreed (30.8%) that people who are addicted to a substance can quit whenever they want.

Table 8 shows a change in most responses within the attitude construct posttest. The only question in which responses remained generally the same from pre to posttest was Q5, where none of the WDAs agreed or strongly agreed that they had the right to diagnose another student. Responses for Q6-Q8 did change, however. After the training, all WDAs either agreed (46.2%) or strongly agreed (53.8%) that most ASU students do not drink. In the pretest, 38.5% disagreed with this statement, showing that Recovery 101 changed their attitude from the misconception that most ASU students drink a lot to the reality that most do not drink too much.

Every WDA either agreed (46.2%) or strongly agreed (53.8%) that they were a Recovery Ally, up from 69.2% who agreed or strongly agreed from 15.4% in the pretest. This change could have been the result of either knowledge (they came to know what is meant by Recovery Ally) or as a result of attitude (after hearing the student panel, they

Table 8

Posttest Response Frequencies (Attitude Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statements.				
Q5. I have the ability/right to diagnose another student with alcoholism or addiction.	**76.9%**	**23.1%**	0.0%	0.0%
Q6. In reality, most ASU students don't drink too much.	0.0%	0.0%	**84.6%**	**15.4%**
Q7. I consider myself a "Recovery Ally."	0.0%	0.0%	**46.2%**	**53.8%**
Q8. People who are addicted to a substance can stop drinking whenever they want.	**69.2%**	**30.8%**	0.0%	0.0%

Note. $n = 13$.

saw the need to help those in recovery). Of note is that all WDAs correctly disagreed or strongly disagreed with the statement, "People who are addicted can stop whenever they want" (Q8), in the posttest. I believe this was a direct result of listening to the student panel, many of whom said that they attempted to quit using substances many times after multiple negative consequences and were not able to on their own.

Table 9 shows the results of the follow-up test distributed at the end of the semester. At the end of the semester, all of the WDAs still either strongly disagreed (66.7%) or disagreed (33.3%) that they had the right or ability to diagnose another student. None agreed or strongly agreed in either posttest or follow-up test, which means that attitude remained the same. There was a decrease in correct answers for Q6. In the posttest, 0% strongly disagreed or disagreed that most ASU students do not drink, whereas the follow-up test data show that 11.1% strongly disagreed and 11.1% disagreed with the statement. An entire semester went by between posttest and follow-up test, so perhaps some experiences the WDAs had during that time changed their answers. The

Table 9

Follow-Up Test Response Frequencies (Attitude Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statements.				
Q5. I have the ability/right to diagnose another student with alcoholism or addiction.	**66.7%**	**33.3%**	0.0%	0.0%
Q6. In reality, most ASU students don't drink too much.	11.1%	11.1%	**66.7%**	**11.1%**
Q7. I consider myself a "Recovery Ally."	11.1%	0.0%	**55.6%**	**33.3%**
Q8. People who are addicted to a substance can stop drinking whenever they want.	**44.4%**	**55.6%**	0.0%	0.0%

Note. $n = 9$.

WDAs lived and worked within the residence halls, which could have been a place of socializing and even drinking. Therefore, it may have been the case that their experiences with other students who were drinking changed their attitude. For Q7, the majority of WDAs still considered themselves a Recovery Ally (55.6% agreed, 33.3% strongly agreed), while 11.1% strongly disagreed. This was a change from the posttest in that no WDAs strongly disagreed or disagreed with that statement, which could have been due to negative experiences in residence halls with other students, or perhaps it was due to not having worked with any students in recovery. What the theory of planned behavior does not adequately explain is variables such as past experience or environmental factors, all of which go into developing or retaining attitude.

Results remained similar for Q8, where all of the WDAs either strongly disagreed (44.4%) or disagreed (55.6%) with the statement that people who are addicted can stop using whenever they want. No WDAs agreed or strongly agreed with that statement in either post or follow-up test.

Qualitative results. The data collected and analyzed to produce the results of RQ2 are from two qualitative interview questions: "Think back to the beginning of the semester, before the initial 'Recovery 101' training—what were your views on addiction recovery before the training?" and "Has working with students in recovery (going through the training, listening to student panels, and working on recovery-related events) impacted your initial views? Why or why not?"

Theme 1: Initial attitudes on recovery. *Assertion 1: The WDAs' initial attitudes on recovery before the Recovery 101 training were either neutral or negative due to influence from past experience (i.e., relationships with family or friends).* RQ2 investigated the extent to which Recovery 101 informed WDAs' attitudes about students in recovery. To answer this question, initial views (pretraining) were first acknowledged by the WDAs to determine a baseline attitude about students in recovery. The two theme-related components that emerged from the data indicate that WDA attitudes toward students in recovery were either: (a) neutral, or (b) negative due to past experience. These qualitative questions, although asked after the training, were in line with the pretest quantitative answers in the attitude construct, which illustrated that many WDAs (53.8%) believed that most ASU students do not drink, and 15.4% did not consider themselves a Recovery Ally.

Subtheme 1a: WDA attitudes on recovery were neutral. Participant 1 shared a neutral understanding of students in recovery pretraining, saying, "I hadn't thought much about addiction and recovery before the training this semester." Participant 2 stated that her initial views were "pretty similar" to what they were after the training, while Participant 3 noted, "My views were never negative, just less involved."

Subtheme 1b: WDA attitudes on recovery were negative due to past experience.

Participant 4 did not have a positive view of people in recovery and noted that the initial views were influenced by past experiences with friends and family members:

> I didn't have a positive opinion of people who were addicted to something, or were in recovery. I think I still did associate that with people who had made bad decisions and it was more so their fault . . . I do think I had biased opinions.

The reason Participant 4 noted for the biased opinions was "personal experiences with people who were going through addiction, like an ex-boyfriend of mine was addicted to a lot of different things." This experience was "very hard, going through a close personal relationship with someone who you see and you want to identify as being addicted to something but they are unable to do that." The powerlessness in this statement, the inability to support a loved one despite best efforts, was one that led to having "more of a negative light when looking at those people."

Mindfulness practice, which was taught and encouraged in Recovery Ally, has been proven to increase compassion in both self and others (Kabat-Zinn, 1990). The overarching philosophy of mindfulness was chosen to support the development of more empathetic attitudes toward the WDAs' peers, and in particular, students in recovery. The data revealed that WDAs' initial views of students in recovery were either neutral or negative, and therefore, the next interview question was meant to solicit shifts in attitude posttraining. An objective of the trainings, including the practice of mindfulness, was to alter negative attitudes to more positive attitudes to better support students in recovery. However, a downside to asking a question where an individual has to "look back" and rely on memory to give an answer is inherently flawed, as memory is often unreliable and imprecise.

Theme 2: Misperceptions about students in recovery were corrected. *Assertion 2: The training impacted the WDAs' attitudes by correcting misperceptions and by bringing a "face to the name" of students in recovery.* A main learning objective in Recovery 101 and Recovery Ally training was to correct misperceptions and stereotypes about students in recovery. As illustrated through the following examples, the WDAs identified that they had previous misconceptions and stereotypes toward students in recovery and that these misperceptions were corrected due to the training bringing a "face to the name" of students in recovery.

Subtheme 2a: WDAs had misconceptions about students in recovery pretraining. When asked to share an example of how attitude had shifted toward those in addiction recovery, Participant 1 stated, before the training:

> I might have been willing to say that becoming addicted to some substance may be a student's fault, or a result of bad decisions, I recognize now the outside impact . . . I have gained a lot of respect for people who are in recovery.

This WDA showed a level of self-awareness that she had gained as a result of the training. These kinds of realizations, both pleasant and unpleasant, can be the product of mindfulness practice, which calls for a nonjudgmental awareness of self, others, and life circumstances.

Two WDAs noted that they realized becoming addicted to a substance can occur at a much younger age than previously thought. Participant 2 said the training

> brought me to a younger place, cause a lot of the people that I have interacted with in my life have been a lot older, so I've just viewed it as—that you're not an alcoholic until you're 35. But clearly that's not true.

Participant 3 stated, "Addiction really starts a lot younger than I had originally assumed . . . I think those are the biggest changes, the young age and the population."

Subtheme 2b: The training brought a "face to the name" of students in recovery.

In addition to correcting misperceptions, most notably the fact that there was no age minimum to addiction, the training personalized students in recovery by giving WDAs a "face to the name." Participant 1 said that working with students in recovery impacted his initial views: "I now have a face to the name, so to speak. Being able to talk with the student panel, I have seen how badly addiction can affect somebody and how hard it is to recover from." Participant 2 stated that the training

> just put a human face to the "when your brain is addicted, this is what it looks like," and then there's a person like, that that brain belongs to . . . here's this real, live person that is dealing with this.

Measuring attitudes is difficult, as self-report could be altered to put a more positive spin for the sake of "saving face." Additionally, as noted previously, asking a person to recall their attitudes could prove to be faulty, as memory is fragile, especially the more time goes by. However, I do believe all of the WDAs were being honest and answering the questions to the best of their abilities. Yet, if I were to conduct this training again, I may ask this question in the beginning of the semester, during Recovery 101, and ask a follow-up question after the Recovery Ally training.

Summary of quantitative and qualitative results for Research Question 2.

Quantitative and qualitative results both point to an overall shift of a more positive attitude to issues related to students in recovery, as well as a softening toward students in recovery themselves. Attitudes are beliefs deeply ingrained, often stemming not just from knowledge but from direct experience. The discrepancy between the 38.5% of WDAs who disagreed that most ASU students do not drink alcohol, and the 84.6% who knew that only 40% of ASU students drink alcohol, illustrates that knowledge of facts was not

always enough to change attitude. This is a flaw within the theory of planned behavior, which does not account for personal experience and often provides a linear explanation for one's actions (knowledge – attitudes – behavior intention). If knowledge was enough, we would see the same percentages for both answers.

Participant 4, who expressed the most bias due to negative experience with people in her life who were in active addiction, including her boyfriend and her family, was the one who shifted her attitude most significantly. She may have been drawn to this training and to working with students in recovery to gain a deeper understanding of the behaviors and stories that led up to their addiction and subsequent recovery. I was most impressed with her attitude shift going from believing that addiction was a result of "bad decisions" to an "increase in empathy" toward students in recovery. She expressed, "The more knowledgeable I can be, the more perspectives I can hear, the better I can treat everyone I meet and the more aware I can be of conditions or things they're going through." Compassion is a positive trait in a peer educator, one that can be strengthened through the use of mindfulness, in addition to knowledge- and attitude-building.

Results for Research Question 3: How and to What Extent Does Peer Educator Knowledge and Attitude Toward Students in Recovery Influence Their Behavior Intentions Toward Students in Recovery?

Quantitative and qualitative data were collected and analyzed to answer RQ3. Quantitative data sources included true/false and Likert-type scales on the pre, post, and follow-up surveys. Qualitative data sources included post and follow-up survey short answer questions and four qualitative interviews. First, the quantitative data results are presented, and then the qualitative data results are presented.

Quantitative results. The quantitative data gathered and analyzed for the results of RQ3 were obtained from three sources: the pre, post, and follow-up survey instrument. Survey Questions 9-12 measured the behavior construct to determine how participation in the Recovery 101 training informed the WDAs' behavior intention toward students in recovery. Ajzen's (1991) theory of planned behavior indicates that knowledge and attitudes are two key forces that make up the intent to behave (or not) in a certain way. Therefore, the construct of behavior intention was measured after accounting for knowledge and attitudes. Data frequencies were analyzed using SPSS statistical software. The construct of behavior intention is illustrated in Table 10. The correct answers are in bold. Behavior intention toward a task, as relayed in the theory of planned behavior, is correlated with one's knowledge and attitude toward the activity. In this case, the WDAs' support of students in recovery was measured. In the pretest, the results for Q9 were split between very unlikely (23.1%) / unlikely (23.1%) and likely (52.8%) to attempt to convince another student who clearly has a problem that they have an alcohol or drug problem. This signifies that the intentions of the WDAs were divided in regard to this issue before the training.

The majority of WDAs were either likely (38.5%) or very likely (46.2%) to tell students in recovery that there are actually many nondrinkers at ASU (Q10), which suggests that their behavior intentions were in line with their pretest knowledge (84.6% answered it was true that 40% of ASU students choose not to drink, Q2) and pretest attitude (61.5% agreed or highly agreed that in reality, most ASU students do not drink too much, Q6).

Table 10

Pretest Response Frequencies (Behavior Intention Construct)

Question (Level of Likelihood)	Very Unlikely	Unlikely	Likely	Very Likely
How likely would you be to:				
Q9. Attempt to convince another student who clearly has a problem that they do have an alcohol or drug problem.	**23.1%**	**23.1%**	53.8%	0.0%
Q10. Tell students in recovery that there are actually many nondrinkers at ASU.	7.7%	7.7%	**38.5%**	**46.2%**
Q11. Support a student in recovery by listening to them without judgment.	0.0%	0.0%	**15.4%**	**84.6%**
Q12. Let someone know that if they think they are addicted to a substance, then they have to try hard not to use it—otherwise, they don't *really* want to stop.	**23.1%**	**53.8%**	23.1%	0.0%

Note. $n = 13$

All WDAs were either likely (15.4%) or very likely (84.6%) to support a student in recovery by listening to them without judgment (Q11). The fact that no WDAs disagreed with this statement may be due to their job descriptions as peer educators and, therefore, being sources of support to their fellow students. Most WDAs were either very unlikely (23.1%) or unlikely (53.8%) to let someone know that, if they thought they were addicted to a substance, then they have to try not to use it, otherwise they do not *really* want to stop (Q12), also aligning with their pretest knowledge of addiction as a chronic, relapsing disease in Q4 (53.8%) and their pretest attitude that people who are addicted to a substance can stop whenever they want in Q8 (92.3% strongly disagreed or disagreed with the statement).

Table 11 provides posttest data as related to behavior intention. After the training, more than half of the WDAs would not attempt to convince another student that they have a problem (61.6%), a slight change from just under half (46.2%) in the pretest. This

Table 11

Posttest Response Frequencies (Behavior Intention Construct)

Question (Level of Likelihood)	Very Unlikely	Unlikely	Likely	Very Likely
How likely would you be to:				
Q9. Attempt to convince another student who clearly has a problem that they do have an alcohol or drug problem.	**23.1%**	**38.5%**	23.1%	15.4%
Q10. Tell students in recovery that there are actually many nondrinkers at ASU.	0.0%	0.0%	**23.1%**	**76.9%**
Q11. Support a student in recovery by listening to them without judgment.	0.0%	0.0%	**7.7%**	**92.3%**
Q12. Let someone know that if they think they are addicted to a substance, then they have to try hard not to use it—otherwise, they don't *really* want to stop.	**53.8%**	**15.4%**	15.4%	15.4%

Note. $n = 13$

suggested a misconception that it was the WDAs' responsibility to convince another student of an addiction problem. There could be a couple of reasons for this misconception. One reason could point to an underlying bias on the part of the WDAs, that it was their judgment call to determine whether another student has a "problem," rather than allowing the other student to come to that decision on their own. However, another reason for this misconception could actually point to more altruistic attitudes on the part of the WDAs. As student employees in "role model" positions, some WDAs may have believed it was their duty and responsibility to bring to light problems that their peers have and may not even be aware of; thereby, the WDAs could have provided support stemming from their expertise in the realm of health and wellness. Perhaps the WDAs believed it was their job to convince other students of their problems, that it was a way of helping their peers and that it was the expected answer.

All WDAs would tell a student in recovery that there were many nondrinkers at ASU (Q10) and would support a student in recovery by listening to them without judgment (Q11). The majority (69.2%) answered either very unlikely or unlikely to Q12, lower than the pretest response (76.9%), and in the opposite direction I was hoping for. This result indicated that this portion of the training needed to be clarified, and that although a person who is addicted to a substance may truly want to stop, it requires more effort than "trying hard." It lacks the understanding and empathy of how addiction works and that someone can really want to stop and still struggle with their addiction.

Nine WDAs responded to the follow-up test, and Table 12 depicts their responses. The majority of WDAs were either very unlikely (22.2%) or unlikely (44.4%) to attempt to convince another student that they have a drug or alcohol problem, and only 33.3% were likely to attempt to convince. This is a change from the posttest, where 23.1% were likely and 15.4% were very likely to attempt to convince another student that they have a drug or alcohol problem. This was an intended change within the Recovery 101 and Recovery Ally training.

All WDAs were likely (55.6%) or very likely (44.4%) to tell others that there are many nondrinkers at ASU. While all of the WDAs were likely or very likely to do so on the posttest, the distribution of the scores was different, with 23.1% being likely and 76.9% very likely to tell students in recovery that there are many nondrinkers at ASU. This was a surprising result, as the WDAs were more emphatic in their responses in the posttest than in the follow-up test at the end of the semester, perhaps due to listening to

Table 12

Follow-Up Test Response Frequencies (Behavior Intention Construct)

Question (Level of Likelihood)	Very Unlikely	Unlikely	Likely	Very Likely
How likely would you be to:				
Q9. Attempt to convince another student who clearly has a problem that they do have an alcohol or drug problem.	**22.2%**	**44.4%**	33.3%	0.0%
Q10. Tell students in recovery that there are actually many nondrinkers at ASU.	0.0%	0.0%	**55.6%**	**44.4%**
Q11. Support a student in recovery by listening to them without judgment.	0.0%	0.0%	**0.0%**	**100.0%**
Q12. Let someone know that if they think they are addicted to a substance, then they have to try hard not to use it—otherwise, they don't *really* want to stop.	**66.7%**	**33.3%**	0.0%	0.0%

Note. $n = 9$.

the student panel immediately before the posttest. Conceivably, the WDAs may have been more enthusiastic directly after the training and hearing other student's stories.

Happily, 100% were very likely to support a student in recovery in the follow-up test, a minor elevation from the 92.3% who were very likely in the posttest. All WDAs were either very unlikely (66.7%) or unlikely (33.3%) to let someone know that, if they are addicted to a substance, they have to try hard not to use it. This was an improvement from the posttest, where nearly one third of the WDAs were still either likely (15.4%) or very likely (15.4%) to do so; this could have been a result of experience working with those in active substance use or misuse.

Qualitative results. The qualitative results for RQ3 were determined from three separate sources: the short-answer questions in the postsurvey, the short-answer questions in the follow-up survey, and the qualitative interview responses. The short-answer questions were designed to promote behavior intention toward supporting students in

recovery. By allowing the WDAs to use their own words to think about their version of what support meant to them, the goal of asking these questions was to make clear their future behavior intentions toward supporting their peers.

In addition to the short-answer responses, the following interview questions informed the results to RQ3: "Have you encountered/worked with/engaged in conversation with a student in recovery? Tell me about the situation. If so, were you able to support them? How?" or "If you haven't yet worked with a student in recovery, tell me about how you think you would engage with them. What would you try to do in order to best support them?" The results for RQ3, how and to what extent WDA knowledge and attitudes toward students in recovery influenced their behavior intentions toward students in recovery, are presented in these sections.

Postsurvey short-answer responses. All 13 WDAs stated that they did plan to be a Recovery Ally. There was not much variation in the answers. The two key themes that emerged from the responses were that the participants planned to be Recovery Allies by either listening to students in recovery or connecting students in recovery with resources. One participant stated they planned to continue on for the Recovery Ally training; however, this participant did not note listening with empathy or providing resources.

The first theme of listening to students in recovery was evident in all but one response. Twelve WDAs stated they would listen to a student in recovery. Out of those 12, four stated they would listen without judgment and three others stated they would listen with empathy, which were two of the recommendations within the knowledge-building portion of the Recovery 101 training. In both postsurvey quantitative and qualitative data, this was one key way the WDAs expressed that they could support a

student in recovery, simply by listening—100% of the WDAs said they were likely or very likely to listen to a student in recovery in the quantitative survey, corresponding to the 12 who listed "listening" in their short-answer responses. This short-answer question was intended to prime the WDAs' attitudes in setting and attaining their goals, should they choose to engage with a student in recovery.

Eight participants listed both listening to students in recovery and connecting them with resources as a support mechanism. One participant noted, "I will be available to them to listen without judgment whenever they need and provide resources to them when they choose to get help." Resources and listening were two of the key takeaways from the Recovery 101 training on how to support students in recovery. In this way, knowledge (resources and listening strategies)—and ease of use of knowledge—aligned with behavior intention. The theory of planned behavior indicates that ease or difficulty of performing a behavior at a given time or place can shape intention to perform that behavior. In this case, the knowledge transferred to the WDAs was easy to comprehend and put into practice. With a list of on- and off-campus resources stated in the training, along with several listening techniques ("listen without judgment") and key phrases to use ("ask *what* happened instead of *why* did that happen"), WDAs left Recovery 101 with a clear and direct sense of steps to take if they were in a position to converse with a student in recovery. Knowing these steps made for straightforward goals for potential future behaviors.

The responses reflected knowledge gained in the Recovery 101 training, as methods for communicating were discussed in the training as well as on- and off-campus resources for students in recovery. As all but one WDA stated they would either

communicate effectively with a student in recovery and/or connect them with resources, my hypothesis that the Recovery 101 training would motivate or inspire the peer educators with intention to use these skills proved to be correct.

Follow-up short-answer responses. Nine out of 13 participants responded to the follow-up survey, and of those nine, only six responded to the short-answer question. All six stated that they considered themselves Recovery Allies. Two responded with a "yes" but did not provide any further explanation. Two explained that they considered themselves a Recovery Ally because they were able and willing to listen to students in recovery. One stated they were here to support students in recovery, but did not list any specific ways to do so. One referenced their role as a peer educator as a means of support:

> Yes, I want to support ASU students so that they can achieve all their goals. As a mentor, I feel that it is important to make sure that every community you are working with feels empowered and supported. I think that those in recovery on college campuses are especially in need of this support.

There was a high attrition rate (close to half of the WDAs did not respond to the short-answer follow-up questions), possibly due to the timing of survey distribution, which was at the end of the semester and, therefore, a busy time for students with final exams and the end of classes. However, all six responses were positive in that they reflected the acceptance of being a Recovery Ally. As there were no identifiers for the qualitative interviews (pre, post, and follow-up surveys asked for the confidential identifier of the first three letters of their mother's first name plus the last four digits of the participant's phone number), there was no way to determine if any of the participants in the follow-up survey had also completed the semester-long Recovery Ally training. However, all participants completed the Recovery 101 training, so it may be suggested

that Recovery 101 supported the six respondents' decision to consider themselves Recovery Allies at the end of the semester.

Qualitative interview results. The qualitative interview questions for RQ3 were intended to examine behavior (if the WDA did engage with a student in recovery) and behavior intention (if the WDA did not yet engage to a student in recovery). The questions were: "Have you encountered/worked with/engaged in conversation with a student in recovery? Tell me about the situation. If so, were you able to support them, how?" or "If you haven't yet worked with a student in recovery, tell me about how you think you would engage with them. What would you try to do in order to best support them?"

Theme 1: Positive learning experience. *Assertion 1: The WDAs reported having a positive learning experience after engaging with students in recovery, or felt prepared to engage with a student in recovery if they have not yet done so.* Three out of the four WDAs reported speaking to a person in recovery during their final project and at their outdoor tabling event (an ASU alumnus in recovery, a student who was born addicted to substances, and a student who was in recovery from an eating disorder), while one WDA noted that, while she did not speak directly to a student in recovery, she felt she had the tools to do so if she did have such an encounter.

Subtheme 1a: The WDAs either engaged with a student in recovery or planned to engage with a student in recovery. The WDAs engaged in conversation with a person in recovery at their final event, suggesting they were able to enact the desired answers for both quantitative and short-answer responses ("listening without judgment"), and they reported having a positive experience. Participant 1 spoke with an ASU alumnus who

stated that he was a "dry drunk" for most of his life after his brother died from cirrhosis. Participant 1 reported that he "appreciated [the alumnus] stopping by" and found it "enlightening to talk to someone who had been through what he had." Participant 1 also stated that he provided support through the action of speaking with the alumnus ("I learned something from it, so I think I provided support").

Participant 2 reported speaking to a student who was born addicted to substances and was in recovery from this experience her entire life:

> She told me that when she was . . . when her mom was pregnant with her, that she was drinking and doing a lot of drugs so she was born addicted and she's lived her whole life since then, she's had to live the life of someone who is recovery without having made those choices herself.

This was a positive experience for the WDA ("The experience was really impactful for me") due to the awareness it brought her ("I felt worse for her, because it wasn't her fault, but then I thought . . . people make choices, yes, but is it really anyone's fault they're an alcoholic?").

The theory of planned behavior does not take into account to a great extent what is experiential knowledge, or past or present experience. A large part of my reasoning behind having the WDAs complete a final project as part of Recovery Ally was so they would have direct experience working with students in recovery. While the theory of planned behavior does not cover experiences as a predictor of future behavior, the theory of self-efficacy (TSE) does. The TSE notes that the more positive experiences are mastered, the greater the likelihood of future engagement in similar behavior. Chapter 2 explained the self-efficacy construct in greater detail.

Participant 3 spoke to students in recovery from an eating disorder during her final event ("One student actually confessed to me that he was in recovery from an eating disorder") and reported being able to support him through providing resources ("I also provided information on Recovery Rising") and the use of the social norming stemming from institutionally relevant statistics:

> I think there was a statistic that says 80% of ASU students reported being uncomfortable with their physical appearance, so I wanted him to know that he's not the only one that feels like this, there are actually a lot of people who feel like that, so just normalizing a stigma and letting him know that he is not alone in his recovery.

Although the statistic was incorrect (according to the 2017 ACHA-NCHA, less than half of all ASU students reported being uncomfortable in their appearance, not 80%), this WDA's statement illustrated she was using statistics as a way to normalize behavior in an attempted effort to support her fellow student. Reducing stigma through social norming was listed within the Recovery 101 as a supportive behavior, and while the knowledge was incorrect, the attitude and behavior of support was evident. Participant 3 reported this interaction as a positive, "inspirational" experience: "It was really nice to see how a simple [recovery] program like that could give someone the opportunity to share their story, or just you know, show they could belong to a community."

Subtheme 1b: Prepared to engage. One WDA did not directly engage with a student in recovery, perhaps because her final project was passive (Well Wall) rather than interactive (tabling event). Participant 4 reported talking to the student panel at the Recovery 101 training and learning engagement and conversational skills from them. This conversation with the student panel "opened [her] eyes a lot more to how to approach someone or how to talk with someone about something they're going through."

This approach included asking the right questions ("I liked the method we talked about, like the way you're asking questions . . . 'What happened?' instead of 'Why did that happen?'"). This was defined as a "really important approach" that shed light on behavior intention:

> The approach is something I plan to use if I do feel like someone is struggling with something related to addiction because I can never say, "Oh, you're addicted to this," because that's not an appropriate way to go about it.

Participant 4 stated she "feels prepared" to interact with a student in recovery after the training, "whereas, before [the training], I don't think I would have known to do it, if I'm being honest." In her case, knowledge was an important predictor of planned future behavior.

Summary of quantitative and qualitative results for Research Question 3.

Quantitative results from the behavior intention construct were mixed and did not always align with the short-answer data. In the short-answer questions, the WDAs stated they would support their peers by listening, and some stated "without judgment" specifically. In the quantitative data across the board, all of the WDAs answered that they would support a student in recovery by listening without judgment (Q11). If all WDAs answered that they would support a student without judgment, it would suggest that the other answers chosen would be framed as without judgment as well. However, this was not the case. In both the post and follow-up test, attempting to convince another student they had a problem (Q9) and letting someone know they have to try hard to stop using, or else they do not *really* want to stop (Q12) were not 100% correct, as Q11 was. Attempting to convince someone they have a problem, and telling someone they have to *really* want to

stop using, points to an internal judgment, one that suggests they know more about the person trying to get help than that person knows about themselves.

The qualitative results from interview questions did line up with the WDAs using both their knowledge (statistics, social norming, resources, and empathetic listening) and their attitudes (specifically after hearing the student panel share their personal stories) to enact the behaviors or behavior intentions of supporting students in recovery. While three WDAs directly spoke to students in recovery (displaying actual behaviors), one did not encounter a student in recovery yet, but felt prepared to do so at a given opportunity (stating behavior intentions).

Results for Research Question 4: How and to What Extent Does Recovery 101 and Recovery Ally Training Inform Peer Educator's Self-Efficacy Toward Supporting Students in Recovery?

Quantitative and qualitative data were collected and analyzed to answer RQ4. Quantitative data sources included true/false and Likert-type scales on the pre, post, and follow-up surveys. Qualitative data sources included post and follow-up survey short-answer questions and four qualitative interviews. The quantitative data results are presented first, and the qualitative data results are presented subsequently.

Quantitative results. The quantitative data gathered and analyzed for the results of RQ4 were obtained from the pre, post, and follow-up survey instrument. Survey Questions 13-16 measured the self-efficacy construct to determine how participation in the Recovery 101 training informed the WDAs' self-efficacy toward supporting students in recovery. Bandura's (1977) theory of self-efficacy, or one's perceived confidence in their ability, states that this construct influences one's engagement in a task—in this case,

the task of supporting students in recovery. Studies also indicate that the practice of mindfulness supports greater self-efficacy (Bohecker & Doughty Horn, 2016; Kabat-Zinn, 1990; Pipe et al., 2009; Soysa & Wilcomb, 2015). Data frequencies were analyzed using SPSS statistical software.

Table 13 exhibits pretest response frequencies for the test questions measuring the construct of self-efficacy, or personal confidence in ability. In the pretest, all of the WDAs either agreed (84.6%) or strongly agreed (15.4%) that they are confident in the Recovery Ally goals they set for themselves, perhaps indicative of their roles and previous training as peer educators. Only 7.7% disagreed that they will keep trying to accomplish what they set out to accomplish, even if it is harder than they thought, which showed that almost all of the WDAs perceived themselves to have self-efficacy in accomplishing their own set goals. All either agreed (61.5%) or strongly agreed (38.5%) that their hard work supporting other students pays off, and all either agreed (30.8%) or strongly agreed (69.2%) that their ability as a peer educator grows with effort and learning. These responses indicated a strong sense of self-efficacy for almost all of the WDAs as related to their roles as peer educators.

Table 14 depicts the response frequencies for the posttest. Sadly, 7.7% of WDAs responded that they strongly disagreed they are confident in the Recovery Ally goals they set for themselves. In the pretest, 100% either agreed or strongly agreed. Although the *strongly agreed* responses increased from 15.4% in the pretest to 38.5% in the posttest, 7.7% disagreed.

For Q14, most of the WDAs either agreed (38.5%) or strongly agreed (46.2%), but 7.7% responded *disagree* on the pretest, with another 7.7% responding *strongly*

Table 13

Pretest Response Frequencies (Self-Efficacy Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q13. I am confident that I will achieve the "Recovery Ally" goals I set for myself.	0.0%	0.0%	**84.6%**	**15.4%**
Q14. Once I've decided to accomplish something, I keep trying to accomplish it, even if it is harder than I thought.	0.0%	7.7%	**53.8%**	**38.5%**
Q15. I believe my hard work of supporting other students pays off.	0.0%	0.0%	**61.5%**	**38.5%**
Q16. My ability as a peer educator grows with effort and learning.	0.0%	0.0%	**30.8%**	**69.2%**

Note. $n = 13$.

Table 14

Posttest Response Frequencies (Self-Efficacy Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q13. I am confident that I will achieve the "Recovery Ally" goals I set for myself.	7.7%	0.0%	**53.8%**	**38.5%**
Q14. Once I've decided to accomplish something, I keep trying to accomplish it, even if it is harder than I thought.	7.7%	7.7%	**38.5%**	**46.2%**
Q15. I believe my hard work of supporting other students pays off.	7.7%	0.0%	**38.5%**	**53.8%**
Q16. My ability as a peer educator grows with effort and learning.	7.7%	0.0%	**30.8%**	**61.5%**

Note. $n = 13$.

disagree on the posttest. However, this outlier was the result one student (identifier "ann9094") who answered *strongly disagree* to every self-efficacy construct question (Q13-Q16) in the posttest. Unfortunately, this student's answers indicated they were *less* confident in the posttest than in the pretest. In the pretest, they agreed with Q13-Q15 and strongly agreed with Q16. Perhaps the student had an inflated sense of confidence before Recovery 101 and believed themselves to have acquired all the necessary information from previous trainings and experience to achieve important goals related to being a peer educator. But, after listening to the lecture and the student panel in Recovery 101, they saw gaps in knowledge related to addiction and recovery and realized there was more to understand about these topics than previously thought. Sometimes, increasing knowledge allows one to see how much they do *not* know about a certain topic. Therefore, this gap in knowledge may have become evident during the training and this one student lost confidence. Most responded positively to Q15. There were not significant changes for Q16, as 30.8% agreed in both the pre and posttest, perhaps because ongoing learning and opportunities as a source of growth were not specific learning objectives within the training.

The response frequencies for the follow-up test are shown in Table 15. A look at the table shows the data to all be skewed to the positive side, as all of the WDAs either agreed or strongly agreed with all four questions measuring self-efficacy. These data suggest that the WDAs have a strong sense of self-efficacy in accomplishing their goals, both as Recovery Allies (Q13) and in what is important to them (Q14). All of them agree (55.6%) or strongly agree (44.4%) that their hard work of supporting other students pays off and that their ability as a peer educator grows with effort and learning (44.4% agree,

Table 15

Follow-Up Test Response Frequencies (Self-Efficacy Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q13. I am confident that I will achieve the "Recovery Ally" goals I set for myself.	0.0%	0.0%	**66.7%**	**33.3%**
Q14. Once I've decided to accomplish something, I keep trying to accomplish it, even if it is harder than I thought.	0.0%	0.0%	**44.4%**	**55.6%**
Q15. I believe my hard work of supporting other students pays off.	7.7%	0.0%	**55.6%**	**44.4%**
Q16. My ability as a peer educator grows with effort and learning.	7.7%	0.0%	**44.4%**	**55.6%**

Note. $n = 9$.

55.6% strongly agree). The percentages are slightly higher than those in the posttest, as there were no outliers evident. The outlier in the posttest self-efficacy construct (ann9094) agreed with Q13-Q16, going back to the same answers from their pretest baseline. Perhaps a semester of experience, and hopefully achievement of some goals, led to a more balanced sense of self-efficacy.

Qualitative results. The three qualitative interview questions that were intended to examine self-efficacy were: "Tell me about your final project. What did you do? How did it go," "How did you feel as you were planning the project and executing the project?," and "Do you feel your confidence in working to support students in recovery has changed from the beginning of the semester? If yes, how? If no, why?"

Theme 1: All WDAs completed the final project. *Assertion 1: The WDAs' final project expressed positive subjective experiences of their final project along with perceptions of the experience of passersby.* The completion of the final project, along

with positive experiences and perception of the experience of passersby, led to increased self-efficacy toward supporting students in recovery. When asked about the final project and how it went, the WDAs expressed the main goals for their final project and also brought in both their subjective experience of the project and how they perceived others (the passersby at the tabling events) responded to the project. When asked about how the WDAs felt as they were executing the project and if their confidence changed since the beginning of the semester, they described a positive experience executing the project and that their confidence levels were higher since the beginning of the semester. As Bandura's (1977) theory of self-efficacy posits, mastery experiences, or accomplishments in performance, occur when one has successfully completed a task with little to no negative experience. Mastery experiences are the biggest predictors in building self-efficacy, and they propel the individual to attempt similar tasks. These data correspond to both pre and posttest self-efficacy construct data in that WDAs' levels of self-confidence were high all around.

Subtheme 1a: WDAs' goals of the final project were expressed. First, when discussing their final project, the WDAs all had goals they wanted to accomplish as a result of the project. These goals were garnered from the training and were self-directed (while I did facilitate the discussion on program planning during the Recovery Ally training, I did not instruct them on what their main goal should be—they came up with it on their own). Tabling project goals were defined as the following: "We were trying to get information out about addiction recovery, and I had to explain what that looks like on a college campus and how hard it is for students," "I wanted to reduce the stigma associated to recovery, addictive habits and I also wanted to . . . provide statistics and

information in regard to social norms . . . I wanted people to be more conscious of those around them so they respect people in recovery and help aid in it," and "I wanted to show some of the knowledge I've gained from the program."

Participant 4's Well Wall project's goal was to increase awareness of the CRP and reduce stigma:

> I think a big part of Recovery Rising is the importance of becoming a more mindful campus when it comes to students in recovery, if just getting the word out there that this exists . . . I wanted to get that out there.

Cognitive processes, including planning and goal-setting, can influence self-efficacy positively if an individual believes they will do well when executing the task (Bandura, 1977). Knowledge gained in Recovery 101 contributed to an expanded understanding of how to complete the final project, thereby increasing self-efficacy and behavior intention.

Subtheme 1b: WDAs' positive subjective experience of the final project were expressed as well as perceptions of the experiences of passersby with the project. The WDAs all expressed a generally positive experience planning ("The planning went really smoothly . . . we were really excited about getting it going") and executing their final project ("It was a lot of fun to talk to people and do something that seemed really impactful," "It was really cool because we were teaching them [the passersby]," "I felt like I was doing something worthwhile, I felt empowered").

Although all of the experiences executing the project were generally positive, Participant 3 noted a "flaw in my program," which was that "some people hear the word recovery or addict and they immediately distance themselves with that association." Participant 3 suggested that a "valuable tool" in shortening this distance could perhaps be solved through "an intermediate term . . . almost before it gets to the point of recovery."

This participant is describing prevention efforts, which is on the opposite end of the spectrum than recovery efforts. Prevention is targeted toward those who have not used substances or have used them minimally, prior to the point of serious negative consequences. Alcohol misuse prevention is an area that can complement—but not replace—recovery support. In fact, what this participant was relaying was the stigma associated with the word "addict" or "recovery," which is precisely what her project was attempting to eliminate through the use of social norms: greater awareness and visibility of the recovery lifestyle.

When discussing perceptions of how other people responded to the project, the WDAs did express a sense of positivity ("A lot of people mentioned how it reflected on them personally when we were doing it and so that was a great experience"). One WDA shared:

> We definitely had some great conversations about what it means to be in recovery and how a university campus is a hard place to be in recovery . . . a lot of people seemed really engaged, a lot of people talked to us about their own experiences.

Participant 4, who had a more passive final project (the Well Wall), was not able to extract perceptions of other people's reactions, though she noted the Well Wall was in a high visibility area, where "a lot of people [were] walking by it on a day-to-day basis so that's really awesome," noting she was available should her peers have any questions ("They know I'm the Well Devil, so they'll be able to reach out to me if they have questions about it") signifying her enhanced sense of expertise and self-efficacy as related to her role as a peer educator.

Subtheme 1c: Increased self-efficacy. Confidence levels rose across all four WDAs: "I learned a lot about the resources and kind of how to approach the topic," "I

was excited to do it, and that made me want to do it well, more so than my normal job," and "My confidence has changed a lot because of this." Self-efficacy was described as stemming from knowing available resources ("I definitely feel more confident, I'm more informed to give people resources," "I not only got all this information about understanding the approach to helping someone who's in recovery, supporting them, but also the resources that we have at ASU that I was completely unaware of until this training," and "It's very important to understand . . . who to refer them to and I think if they want to be referred to someone else, I think it was really great to hear that we have a really huge amazing resource on campus") and knowing how to best converse with a student in recovery ("Knowing that I can help someone by just being myself and asking questions, it makes me feel more confident that I can handle that as opposed to solving their problems," "I've broken the surface of knowing to actually provide valuable input to students . . . I feel more comfortable talking about it . . . just to discuss with a student or an individual that's in their recovery process," and "I feel comfortable having those conversations with them whereas before I would kind of be at a loss for words"). Bandura (1977) notes that vicarious experiences, or modeling of behavior, can be a predictor of self-efficacy. In Recovery 101, the WDAs heard the student panel speak about their experiences with others supporting them, and they also gained knowledge about vocabulary to use when conversing with students in recovery, which modeled the behavior and skills associated with acting as supportive peers.

Participant 2 expressed that her confidence came from knowing her limitations when supporting someone: "I no longer feel like I have to fix things . . . I have gotten more confidence by way of like, taking pressure off myself." This statement speaks to a

greater awareness of self. Mindfulness has been linked to contributing to greater self-efficacy by lessening judgment and criticism about self and others. The understanding that comes from knowing your own limitations is a result of increased mindfulness and therefore, a more realistic and compassionate self-appraisal.

Summary of quantitative and qualitative results for Research Question 4. As a whole, the WDAs generally expressed moderate to high levels of self-efficacy as related to their role as peer educators and supporters of recovery, as indicated by both quantitative and qualitative data. Additionally, the four WDAs who self-selected to participate in the Recovery Ally training displayed evidence of high self-efficacy based on their own selection process. Selection processes, according to Bandura (1977), relay the choices individuals make about tasks in which they choose to participate. Self-perceptions of efficacy in completing tasks successfully influence the choice of whether to engage or not. The fact that the WDAs chose to voluntarily participate in Recovery Ally demonstrates they already may have a foundation of self-efficacy as related to supporting other students.

Results for Research Question 5: How and to What Extent Does the Practice of Mindfulness Throughout the Recovery 101 and Recovery Ally Training Affect Peer Educators?

Quantitative and qualitative data were collected and analyzed to answer to RQ5. Quantitative data sources included true/false and Likert-type scales on the pre, post, and follow-up surveys. Qualitative data sources were gathered from four qualitative interviews. The quantitative data results are presented first and the qualitative data results are presented next.

Quantitative results. The quantitative data gathered and analyzed for the results of RQ5 were obtained from the pre, post, and follow-up survey instrument. Survey Questions 17-20 measured the construct of mindfulness to determine how the practice of mindfulness during the trainings affected the WDAs. Data frequencies were analyzed using SPSS statistical software.

The mindfulness construct was measured in Q17-Q20, and the pretest results are shown in Table 16. The correct answers are in bold. Overall, the table shows the highest scores in the *strongly disagree* or *disagree* columns, responses that indicate a greater awareness of what is going on in the present moment, or mindfulness. Less than half of all WDAs responded agree or strongly agree to each question, indicating that the majority of respondents assessed themselves as being mindful to tasks throughout their day.

Recovery 101 included two brief meditation sessions, one at the beginning of the training (directly after the pretest) and one after the training (before the posttest). The goal of conducting these meditation sessions was to increase mindfulness scores in the posttest by allowing the WDAs to focus with greater clarity on the training. Table 17 illustrates posttest responses. Q17 and Q18 show an increase in mindfulness from the pretest. Q17 answers were highest in either strongly disagree (15.4%) or disagree (53.8%) in the pretest and went up in the posttest with strongly disagree at 38.5% and disagree at 46.2%. Similarly, the majority of Q18 pretest answers were strongly disagree (23.1%) or disagree (53.8%). These went up in the posttest to strongly disagree a 53.8% and disagree at 23.1%. Q19 responses were puzzling, as almost all WDAs (92.3%) stated they either strongly disagree or disagree; however, this number went down to 77% in the posttest. A suggestion as to the reasons behind this decrease in mindfulness for this one

Table 16

Pretest Response Frequencies (Mindfulness Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q17. I find it difficult to stay focused on what's happening in the present.	**15.4%**	**53.8%**	23,1%	7.7%
Q18. I forget a person's name, or similar new pieces of information, almost as soon as I've been told it for the first time.	**23.1%**	**53.8%**	23.1%	0.0%
Q19. It seems I am "running on automatic," without much awareness of what I'm doing.	**30.8%**	**61.5%**	0.0%	7.7%
Q20. I do jobs or tasks automatically, without being aware of what I'm doing.	**30.8%**	**38.5%**	23.1%	7.7%

Note. n = 13.

Table 17

Posttest Response Frequencies (Mindfulness Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q17. I find it difficult to stay focused on what's happening in the present.	**38.5%**	**46.2%**	7.7%	7.7%
Q18. I forget a person's name, or similar new pieces of information, almost as soon as I've been told it for the first time.	**53.8%**	**23.1%**	15.4%	7.7%
Q19. It seems I am "running on automatic," without much awareness of what I'm doing.	**30.8%**	**46.2%**	15.4%	7.7%
Q20. I do jobs or tasks automatically, without being aware of what I'm doing.	**38.5%**	**30.8%**	23.1%	7,7%

Note. n = 13.

question is explained in the next section when discussing the follow-up test. Q20 answers remained the same.

Table 18 shows the score frequencies from the follow-up test as related to the mindfulness construct. Q17 and Q18 scores saw a marginal improvement in mindfulness compared to the posttest scores. Q17 majority scores reflected that most WDAs either strongly disagreed or disagreed with the statements (84.7% in the posttest and 88.9% in the follow-up test), as does Q18 (76.9% in the posttest and 77.8% in the follow-up test). Q20 reflected the highest improvement in mindfulness scores, where 69.3% strongly disagreed or disagreed to the statement that they did tasks automatically without awareness in the posttest and 88.9% in the follow-up test.

However, scores in Q19 suggest less mindfulness than in the posttest. Compared to the posttest, where 23.1% of WDAs agreed or strongly agreed that they were "running on automatic, without much awareness," the follow-up test score jumped to 44.4% agreement with the statement. My hypothesis for the reason behind the puzzling drop in mindfulness lies in the nature of the question itself. All mindfulness construct questions were task-oriented questions, except for Q19, which was trait-oriented. Q17, Q18, and Q20 focus on specific actions (staying focused, remembering someone's name, and doing tasks automatically) while Q19 is an inquiry into personal traits, which are generally more static and less fluid than specific actions.

Anecdotally, it is often said that the more one practices mindfulness, the more they notice how *unmindful* they have been or can be. Often, those who are not mindful do not realize their absence of mindfulness. For example, in learning how to be present in every moment, the more the practitioner may start to see how unmindful previous

Table 18

Follow-Up Test Response Frequencies (Mindfulness Construct)

Question (Level of Agreement)	Strongly Disagree	Disagree	Agree	Strongly Agree
Indicate your level of agreement with the following statement:				
Q17. I find it difficult to stay focused on what's happening in the present.	**11.1%**	**77.8%**	11.1%	0.0%
Q18. I forget a person's name, or similar new pieces of information, almost as soon as I've been told it for the first time.	**22.2%**	**55.6%**	22.2%	0.0%
Q19. It seems I am "running on automatic," without much awareness of what I'm doing.	**11.1%**	**44.4%**	44.4%	0.0%
Q20. I do jobs or tasks automatically, without being aware of what I'm doing.	**11.1%**	**77.8%**	11.1%	0.0%

Note. $n = 9$.

moments have been. A statement of "running on automatic" may seem to tell a story of lack of mindfulness, but the *awareness* of "running on automatic" may point to a *greater* knowledge of mindfulness. Therefore, a drop in Q19 frequency may actually point to a higher acknowledgement of a lack of awareness, which is actually exactly what mindfulness is—a consciousness of self. Research designs that use instruments that rely on self-reporting are at risk for an internal threat to validity known as response shift bias, which may be the explanation for this drop in mindfulness reporting in the post and follow-up tests. Response shift bias occurs when study participants alter or change their "internalized standard for judging their level of functioning with regard to a given dimension" (Howard, Schmeck, & Bray, 1979, p. 130, which, in this case, is mindfulness. Due to various factors in between tests, such as the acquiring of new knowledge and

information, the participant's standard of judgment changes from pre to posttest, which results in a changed way of assessing responses.

Another hypothesis to the proportion of students who reported "running on automatic" may be more positive, especially considering Q17, Q18, and Q20 scores remained similar to the beginning of the semester—the WDAs may have felt increasing self-efficacy in their day-to-day tasks where they felt they no longer had to put in extraordinary effort, but rather, complete the tasks automatically.

Qualitative results. The interview questions from which data were collected to answer RQ5 were: "During the Recovery 101 and the Recovery Ally trainings, we incorporated some mindful meditation practices and tips to be mindful throughout your day. Has this impacted you in any way? How?," "Did you feel differently after doing the mindful meditation during the sessions?," "Have you practiced mindfulness or meditation on your own?," and "How likely would you be to share the benefits of this practice with others? Why?"

Theme 1: WDAs expressed engagement in mindfulness practices posttraining. *Assertion 1: The training allowed the WDAs to enhance their mindfulness practice skills.* The data indicate that the training showed the WDAs the benefits of mindfulness and that they continued their own practice after the training. The qualitative data illustrating the continued use of mindfulness practices in daily life may tie to the quantitative answers within the posttest in that, if my assumption is correct, they point to an increase in mindfulness rather than a decrease.

Subtheme 1a: Increased Mindfulness. All four WDAs said they were still practicing mindfulness on their own as a result of the training ("I have been trying to do

mindful exercises pretty regularly thanks to that," "I like to be conscious of my mindfulness"), and that it has impacted them in their daily lives:

> When we have a meeting or I have something like a group activity where we do a mindfulness exercise, and it's in the middle of the day, I always feel more present during that span of time than if I would have felt if I just showed up and jumped in . . . if you really want to be here for this, this is what you have to do.

Another WDA said, "Mindfulness keeps you calm and present in the moment whereas otherwise, your head can be in other places." This qualitative data bring the puzzling quantitative data to life, with the idea that maintaining mindfulness practice can point out areas of life where awareness is less present. For example, as noted above, this WDA expressed having felt "more present" after a mindfulness exercise versus the habitual, usual way of "jump[ing] in."

Participant 4 is the only WDA who noted a journaling habit ("One thing that I really loved, that toward the beginning of the training that I didn't do as much that I've been doing more is journaling") and the impact it had:

> It has helped me a lot like, get out my stress, my emotions . . . that helps me process my feelings a little more . . . that's one of the biggest things that I've taken from the mindfulness practices.

Journaling can lead to heightened self-reflection (mindfulness), which could lead to a greater sense of self-efficacy (Fong & Krause, 2014). The knowledge one gains about themselves through reflection activities such as journaling can be a predictor, not just of more mindful efforts, but also of greater confidence in task completion.

They expressed feeling differently after doing the meditation sessions during the training. All participants said they felt more "present" and "engaged" and "in the moment" following the meditation sessions during the training ("I felt a lot more present

in the space, more able to engage in the group," "It helped my attention to what we were talking about and my thoughts in that moment of the training to be more centered there"). All WDAs were likely to share the benefits of mindfulness with others: "I see a lot of people when they get stressed out, they shut down a little where if they understood these practices better, they could open up to the wounds, handle it more head on," "I think it is super applicable to everyone and you don't have to be religious . . . it's easy to share something that you personally have the benefits of," "I would be highly likely to share the practice . . . it's a really valuable de-stressor that can provide people like more optimistic and positive outlooks on life."

Participant 4 already shared the benefits of practice with others and noted there were many "different facets of mindfulness and applications of it, if meditation doesn't work for you then maybe exercising or journaling." As noted in Chapter 2, peer-to-peer interaction has been shown to be the most valuable tool in spreading awareness of healthy habits in college students. Role modeling the skillsets associated with mindfulness, which include greater confidence in ability, can serve to support other students in their wellness or recovery journey.

Summary of quantitative and qualitative results for Research Question 5.

The construct of mindfulness started out quite strong in the WDA pre and posttests and continued to remain skewed to the positive side in the follow-up test. Anecdotally, during the Recovery Ally training, all four WDAs mentioned they had first heard of mindfulness when they came to ASU, which suggested this practice was spreading throughout the student population and the university culture. All answers in the qualitative interviews indicated the WDAs' continued, sustained desire to work on creating greater mindfulness

in their lives. Mindfulness was discussed as a "de-stressor" that can keep you "calm" and "present in the moment," as well as a tool that was worth sharing with "anyone who was willing to listen."

Additionally, a unique feature was evident in the data, where the decrease in mindfulness in the pre to post and follow-up test was at odds with the power of mindfulness that came through in the qualitative data. A response shift bias may have occurred in this instance, which is a threat to internal validity that was not considered in the development of the survey instruments (Howard et al., 1979).

Researcher's Subjectivity

As both the researcher and the former lead on the CRP, my bias was one of familiarity. Schram (2003) noted, "Clyde Kluckhohn is reputed to have once stated, 'If a fish were an anthropologist, the last thing it would discover would be water'" (p. 58). For those who research within their work settings, familiarity bias must be noted. It is through the participation of the students within the training—leading the Recovery 101 presentation and the student panel—that I aimed to promote objectivity and reduce bias.

Summary of Results

Quantitative and qualitative data were collected in a mixed-methods action research approach to answer the five questions. A summary of results is included in this section. In Chapter 5, a more detailed analysis of the results and recommendations for future research will be explained.

For RQ1, the construct of knowledge was studied through the collection of quantitative data from pre, post, and follow-up surveys, as well as qualitative interviews. Data show that the WDAs had a solid baseline understanding of addiction and recovery,

as illustrated by more than half of the WDAs answering correctly on all four questions. Posttest data show an improvement in all but one question ("If a student tells me they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict"), where more WDAs chose the wrong answer versus answering "don't know" in the pretest. This could illustrate a deeply ingrained misconception, one that was resistant to attitudinal-based training. Scores remained similar for the follow-up test a semester after the training, and the majority of WDAs chose the correct answers. However, agreement with the statement, "Recovery Allies are people who might not be in recovery themselves, but they support students in recovery," fell from 100% correct on the posttest to 77.8% on the follow-up test, perhaps denoting that fewer WDAs had an opportunity to work with students in recovery than expected, and therefore did not consider themselves to be Allies.

Qualitative data supported the quantitative data, as it illustrated that the WDAs who completed the Recovery Ally training gained knowledge of communication skills to support students in recovery, specifically the use of social norming and relevant statistics. Through reading the book, *Voices of Recovery From the Campus*, the WDAs gained a deeper understanding of students in recovery through their background stories of addiction and subsequent recovery. The WDAs also noted a realization from reading this book, that a student in recovery could be "under their nose" and they might not even realize it. The idea of those in active addiction or recovery blending in with other students was acknowledged, and I believe this was an insight that allowed the WDAs to notice both their limitations in being able to "tell" if a peer was struggling, as well as a

normalization of a student in recovery seemingly being able to assimilate and not stand out from the general population.

For RQ2, the construct of attitude was studied through a mixed-methods approach of quantitative data from pre, post, and follow-up surveys. Qualitative data were collected from short-answer questions and interviews. While over half were correct in answering the pretest questions, two notable exceptions stood out: 38.5% disagreed with the statement, "In reality, most ASU students don't drink too much," and 15.4% did not consider themselves to be Recovery Allies. These are notable answers because, in the pretest knowledge portion, the majority (84.6%) of WDAs were correct in answering that it was true that 40% of ASU students choose not to drink alcohol. Yet, they disagreed that most ASU students do not drink too much. A reason for this response could be that, while Recovery 101 listed the statistic that 40% of students do not drink, the training did not provide greater context on environmental high-risk drinking behaviors. Therefore, the WDAs may have absorbed this one statistic without realizing that the other 60% of students do not drink excessively. Over 15% of WDAs (15.4%) did not consider themselves Recovery Allies at baseline, and this could have been due to a lack of understanding since they may not have heard the term before, especially when taken in combination with the 23.1% of WDAs who answered "don't know" to the pretest Q3 in the knowledge construction portion ("Recovery Allies are people who might not be in recovery themselves, but they support students in recovery").

Posttest data show that all WDAs answered correctly all four questions within the attitude construct, signifying that the knowledge from the Recovery 101 combined with the student panel served to integrate into their attitudes, specifically on the question, "In

reality, most ASU students don't drink too much." The follow-up test scores show a decrease in correct answers after the semester had passed, with 22.2% either disagreeing or strongly disagreeing with the item, "In reality, most ASU students don't drink too much." While these answers are still more correct than at baseline (where 38.5% disagreed with the statement), they do show a reduction in belief that would correspond with the ACHA-NCHA data.

Qualitative data show a similar story as the quantitative, in that, while the WDAs who participated in the Recovery Ally training started out with neutral or negative attitudes toward those in recovery, the book *Voices of Recovery From the Campus,* along with the different perspectives heard from the student panel, served to correct misperceptions and therefore influenced attitude to a more empathetic approach to students in recovery.

For RQ3, the behavior intention construct was investigated through the collection of quantitative data from pre, post, and follow-up surveys as well as short-answer questions and qualitative interviews. Pretest response frequencies show behavior intention to be the weakest in terms of understanding for the WDAs, with more incorrect answers on this construct than in the two previous constructs. More than half would attempt to convince another student that they have an alcohol or drug problem, 15.4% would not tell students in recovery that there are many nondrinkers at ASU, and 23.1% would tell someone they have to "try hard" to quit a substance, otherwise they do not *really* want to quit. These answers indicate some deeply held views that correspond with behavior intention. The only answer where all WDAs answered correctly was that they would support a student in recovery by listening to them without judgment. However, the

rest of their answers indicated that, while they may *think* that they would not judge, taken together, their preconceived notions were in fact judgmental.

Posttest frequencies support a rise in one correct answer in behavior intention, with all WDAs now responding correctly to telling students in recovery that there are many nondrinkers at ASU. Attempting to convince another student that they have a drug problem went from over half of all answers incorrect in the pretest to a lower 38.5% in the posttest. The percentage of incorrect answers to Q12 went up after the training, with 30.8% still likely to tell someone they have to try hard to stop using, or else they do not *really* want to quit (versus 23.1% on the pretest), indicating that the training not only did not have much of an effect on these questions, but also that it may have even solidified preexisting, ingrained ideas and resulting behaviors.

The follow-up test data show a steady 33.3% of all WDAs incorrectly answering that they would attempt to convince another student they have a problem (versus 38.5% in the posttest), but all other answers were correct across the board. Time spent "in the field" as peer educators, interacting with other students, seemed to have more of an impact in correcting misperceptions in all but one question ("attempting to convince another of a drug problem").

Qualitative data do not hold such discrepancies; rather, the interview results indicate a rise in mastery experiences with the three WDAs who engaged with students in recovery, with each having a positive experience interacting with their peers, as well as planning and executing their final project. One WDA expressed a preparedness to engage with students in recovery, although she had not had a chance to do so yet.

For RQ4, the construct of self-efficacy was explored from quantitative data from pre, post, and follow-up surveys, as well as qualitative interviews. Pretest levels of self-efficacy ran high, with all but one question ("Once I've decided to accomplish something important to me, I keep trying to accomplish it, even if it's harder than I thought"), showing 100% correct answers for the WDAs. Previous experience as peer educators, combined with previous mandatory training, could have contributed to these baseline results. Additionally, WDAs must maintain a 3.5 GPA to be accepted and remain in their employment at peer educators, which indicates a high performing student.

Posttest frequencies went down by 7.7% for each question. Perhaps this was due to one WDA (identifier "ann9094") who answered all of the questions incorrectly. With a small sample size, one person contributes a lot of weight to the results. Follow-up test frequencies all measured at 100% correct for each question. The semester of extra experience—as peer educators, as students, and potentially as Recovery Allies—led to higher levels of self-efficacy, as experience generally does. The WDAs could have had mastery experiences within the course of their work, and thereby gained confidence in their abilities.

Qualitative data reflect the quantitative data in that the interview responses indicated that all four WDAs asserted having completed their final project with success in reaching their goals. Those who interacted with a student in recovery during their final project believed their interactions were positive in that they helped their peers by listening to them without judgment, correcting misperceptions through social norming data, and sharing resources. They all noted positive learning experiences throughout the

course of the Recovery Ally training due to engaging with a student in recovery, or felt prepared to do so if they have not yet interacted with a student in recovery.

For RQ5, the mindfulness construct was studied by a review of the collection of quantitative data from pre, post, and follow-up surveys, as well as qualitative interviews. Quantitatively, most WDAs expressed high baseline levels of mindfulness, with over half of all questions being answered correctly. Posttest data show that all but one of the mindfulness questions show either the same or slightly more correct answers. Q19 ("It seems I am running on automatic") is the only question that saw a dip in correct answers, with 23.1% answering incorrectly versus only 7.7% in the pretest. This could have been due to a better awareness of how often they "run on automatic," which could actually be indicative of greater mindfulness. On the posttest, Q19 received even more incorrect answers, at 44.4% versus 23.1%. Again, I would argue that this realization could actually be pointing to a greater self-awareness of one's actions, which is an increase in mindfulness, rather than a decrease.

Qualitative data also show increased mindfulness posttraining, with a greater understanding of how to be more engaged, present, and focused. Tools such as meditation, yoga, exercise, being in nature, and journaling were described as ways that the WDAs practiced mindfulness.

Chapter 4 explained the results of the quantitative and qualitative data collection. Chapter 5 will further refine the analysis, provide a detailed discussion and recommendations for future research.

CHAPTER 5

DISCUSSION

The purpose of this study was to examine social support for college students in recovery from alcohol and other drug addiction through peer interventions called Recovery 101 and Recovery Ally. All Well Devil Ambassadors (WDAs), peer educators responsible for promoting health and wellness in residence halls, were trained for two hours in Recovery 101, and then a subgroup of four WDAs continued on for an additional semester-long training called Recovery Ally. The subject of this study and the goal of both training interventions was for the WDAs to build knowledge, shift attitudes, gain self-efficacy, and develop skills so they may best support their peers in recovery.

Chapter 1 described the need for addiction recovery support and outlined the national, local, and situational context within which Recovery 101 and Recovery Ally took place. College student risk and protective factors as related to substance use were described alongside university-specific health trends data. This was followed by a history of collegiate recovery programs (CRPs) and the researcher's positionality within the local CRP context. Lastly, previous action research cycles that led to the final innovation were explained. Chapter 2 provided an overview of the overarching philosophy of mindfulness and the theoretical perspectives of planned behavior and self-efficacy that framed the intervention and research methodology. Data collection through a mixed-methods approach was described in Chapter 3. Within Chapter 4 was an examination of the qualitative and quantitative results stemming from both interventions. Chapter 5 provides an analytic interpretation of the data results, limitations, implications for future research, and a conclusion.

Synthesis of Findings

Discussion Analysis for Research Question 1

Results from the quantitative measurement of the knowledge construct indicated a strong baseline frequency on addiction and recovery topics for most WDAs. Despite this starting position in the pretest, subsequent quantitative measures indicated a resistance to one question in particular: "If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict." Frequency scores did not show the gains in knowledge in all of the WDAs. Perhaps for some WDAs, this is due to underlying views on alcoholism or addiction—and the preconceived notions on those topics—that were not fazed by the training. These views may be explained by looking at other answers to the quantitative questions, and will be discussed further in this chapter.

Qualitative data did point to learning gains in the realms of communication, resources on and off campus, and compassionate listening skills—all goals of the training innovation. Increased knowledge, according to the theory of planned behavior, can lead to shifts in attitude (Ajzen, 1985). Together, knowledge and attitudes can be used to enhance behavior intention—in this case, supportive behavior toward students in recovery. Knowledge gained through Recovery 101 provided skill-building in effective communication strategies and resources that could benefit the WDAs' peers, thereby leading the way to adopting a set of abilities that could benefit students in recovery.

Taken together, these data indicate knowledge gains in the WDAs, both quantitatively and qualitatively. WDAs presented with existing knowledge and skills in supporting their peers, perhaps making receptivity in new health topics, such as recovery,

easier to process and integrate into their overall understanding. As noted in Chapter 1, peers learn best from one another, especially about issues related to health and wellness (Anderson & Whiston, 2005; Cupples et al., 2010; Hunter, 2004; Jozkowski et al., 2014; Lonsway et al., 1998; White et al., 2009). Increased knowledge by a population of peer educators can serve to provide valuable awareness to students and support peers in recovery.

Discussion Analysis for Research Question 2

In Recovery 101, the student panel was arranged to be the main attitude-shifting portion of the training. By hearing the stories of students just like them, the intention was for the WDAs to build compassion toward students in recovery so they may be better informed—not just on an intellectual basis, but on a felt, personal level—to support their peers. The theory of planned behavior guided the addition of attitude modification to the training (Ajzen, 1985), while the philosophy of mindfulness was also envisioned to encourage compassion through emotional awareness (Soysa & Wilcomb, 2015).

Both quantitative and qualitative results pointed to an overall attitude shift, as WDAs responded more positively to students in recovery. However, much like within the knowledge construct, there existed a small set of WDAs whose attitudes remained similar in the quantitative pre, post, and follow-up tests. While personal histories of the students in recovery did make a difference in attitude for some WDAs, these stories had less of an effect on other WDAs. Attitudes are developed over a lifetime and are constructed through many mechanisms, including knowledge and personal experience (Ajzen, 2005).

That said, when WDAs did convey an attitude shift in the qualitative data, it was expressed as being due to being “more knowledgeable,” hearing “more perspective,” and

being “more aware of the . . . things they’re [students in recovery] are going through.” While knowledge of facts and figures did serve to enhance attitudes from negative to positive, so too did hearing various perspectives of another’s life experience.

Discussion Analysis for Research Question 3

Behavior intention was assessed in RQ3. Similar to the quantitative answers for both the knowledge and attitude constructs, results were mixed, specifically when triangulated with the short-answer qualitative data. Qualitative short answers in the posttest asked whether the WDAs plan to support students in recovery and how they would do so. Everyone replied “yes,” and some elaborated by stating they would listen without judgment and suggest resources, indicating they had integrated the knowledge-building portion of Recovery 101 with their intended behavior.

Interestingly, while all WDAs did state that they plan to support their peers in recovery without judgment in the qualitative section, quantitative results did not suggest a complete decrease in biased behaviors. If 100% of the WDAs answered qualitatively that they would support a student without judgment, it would hint that there should be 100% alignment in the quantitative answers. Yet, the results say otherwise and indicate resistance by some WDAs, as noted in the knowledge construct in Q1 (“If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict”) and the attitude construct in Q5 (“I have the right/ability to diagnose another student with alcoholism or addiction”)—thus indicating the stubbornness of prior beliefs or knowledge and the ways they can be resistant to or misaligned with an individual’s goals. If answered in the affirmative, Q1 and Q5 both point to the respondent having a better sense of another student than the student does about themselves. If the

behavior intentions aligned with one another, qualitatively and quantitatively, then the result frequencies for Q1 and Q5 would have been 100% correct.

The four WDAs who participated in the semester-long Recovery Ally training noted that they either had a positive experience supporting a student in recovery during their final project (behavior) or that they were prepared and equipped with knowledge to engage with a student in recovery as a result of the training (behavior intention). These interview findings from those participating in the semester-long program suggest a longer training may be of greater benefit in altering the attitudes that regulate behavior intention, as the four WDAs who participated in Recovery Ally training had an opportunity to actually engage in some of the supportive behaviors they first learned about in Recovery 101. In fact, as noted in Chapter 1, research has indicated that lengthier trainings do have a more lasting effect on college students (Anderson & Whiston, 2005).

Discussion Analysis for Research Question 4

The construct of self-efficacy was the focus of RQ4. Conceivably, due to the fact that all of the WDAs had already received training on health and wellness topics a semester before the Recovery 101 and Recovery Ally training, and also had a semester to work with their peers in residence halls, all presented with a moderate to high level of self-efficacy throughout the pre, post, and follow-up quantitative tests. Bandura's (1977) theory of self-efficacy states that the perception of whether one will be efficacious at completing a task is indicative of whether that person will select themselves to engage in said task. The four WDAs who continued on to participate in Recovery Ally training may have perceived themselves as having self-efficacy to support their peers, and as such,

they chose to remain on for a lengthier training. Qualitative results show an increased level of self-efficacy after completion of the Recovery Ally training.

Mindfulness practice has been proven to increase self-efficacy (Bohecker & Doughty Horn, 2016; Kabat-Zinn, 1990; Pipe et al., 2009; Soysa & Wilcomb, 2015). Mindfulness was integrated, but not a focal point, of the training. The WDAs who engaged in Recovery Ally learned the skillset of mindfulness to further enrich their work in supporting students in recovery. RQ4 data may suggest that self-efficacy seemed to play a role in self-perception of the WDAs' ability to support students in recovery. Therefore, mindfulness may be a more important component to use in future peer educator training. More on the construct of mindfulness is explained next.

Data Analysis for Research Question 5

The construct of mindfulness was measured in RQ5. Quantitatively, the majority of WDAs indicated they were already versed in mindfulness. When triangulated with qualitative data, the results aligned with one another. In qualitative interviews, the WDAs stated that the Recovery Ally training helped build their mindfulness skills. Those who engaged in mindful practices, such as journaling and yoga, emphasized that they will continue to do so after the training, as it helped them remain "focused" and "present in the moment"—in fact, exactly what research tells us mindfulness has been proven to do (Kabat-Zinn, 1990).

As a practice, mindfulness can build skills in many areas of life, including self-efficacy and compassion. These skills are valuable for everyone, and especially for students who are working to support other students. Given the connection between mindfulness and self-efficacy as noted (Kabat-Zinn, 1990), more research and practice

may be needed to integrate and inquire into how mindfulness can help peer educators in this area.

Analysis Summary

Taken together, these data show that many phenomena contribute to building peer-to-peer support structures for students in recovery. While the population studied—Well Devil Ambassadors, peer educators who already had training in health and wellness—presented with strong baseline knowledge, positive attitudes, compassionate behavior intentions, high self-efficacy, and an understanding of mindfulness, there appeared to be slight resistance to preconceived judgments about addiction and recovery in the quantitative data. However, it should be noted that, within a small sample size, one or two outliers do give the results more weight than within a larger data set.

Many WDAs did enhance their knowledge, due mostly to being taught tangible, easily implementable skills, such as communication strategies and local resources. In cases where attitudes shifted, it appeared to be due to hearing multiple perspectives from peers and listening to their histories and stories. For the WDAs who participated in Recovery Ally training, their attitudes also became more compassionate as a result of reading the book, *Voices of Recovery From the Campus* (Laitman et al., 2003). It seemed the exposure to different stories of addiction and recovery was the main indicator for a shifted attitude. For future trainings, this could be a valuable tool, especially for sensitive topics, such as addiction and recovery.

Mindfulness was woven throughout both Recovery 101 and Recovery Ally, intermingling with building knowledge and shifting attitudes, to provide a springboard to greater self-efficacy and behavior intention for the WDAs to better support students in

recovery. By providing information about the use of mindfulness as a skillset, my hope was that the WDAs would take the tools they learned throughout the trainings to continue building on their important work of supporting their peers and beyond.

Limitations

This dissertation study presented three cycles of research to illuminate the development and application of an innovation intended to provide peer-to-peer support to students in recovery from alcohol and other drug addiction. There were several limitations within the study.

Validity and reliability of the research process are important to mitigate the concern that a researcher may miss sight of a rival hypothesis. Internal validity refers to "the appropriateness, meaningfulness, and usefulness of the inferences a researcher makes" (Fraenkel & Wallen, 2004, p. 152) and allows for a collection of evidence to support the conclusions about the data the researcher infers. External validity is the generalizability of the sample to the population, which is not a primary concern in quantitative descriptive statistics or qualitative analysis in action research (Gabrenya, 2003). Reliability refers to the consistency of the data instrument and instrument administration.

This research design was a pre, post, and follow-up survey design, as well as a qualitative survey administered by the researcher, and therefore, it had inherent threats to internal validity. The threats to internal validity to this study included history, maturation, testing, response shift bias, and possibly the experimenter effect. History refers to the experiences to which the subjects may have been exposed in between testing that could have influenced their answers. This was a threat to internal validity, specifically in

between the posttest after Recovery 101 and the follow-up test at the end of the semester (3 months apart). A 40-hour training, along with having been at their jobs as peer educators for one semester, could have led the WDAs to report a general rise of knowledge, attitude, behavior intention, or self-efficacy, for example. One way to maximize validity was to triangulate the data through qualitative short-answer questions of why they believe themselves to be a Recovery Ally, as that question was specific to supporting students in recovery. Additionally, the description of data through multiple perspectives, known as triangulation in mixed-methods analysis, was a way to check for accuracy and generate validity and reliability (Herr & Anderson, 2015).

Maturation was the next threat, referring to personal maturation. Similar to the history threat, the WDAs may have matured as peer educators, students, and employees, and, therefore, their Likert-type scale scores could have increased as a result—not only toward students in recovery but toward being able to help all students in general. This was an inevitable threat to validity and not one I would have wanted to stifle, as maturation was an expected and desired result of being a trained peer educator. A control group would have minimized this threat; however, this was not realistic for the scope of this study, which aimed to understand the evolutions of students' own selves along several dimensions—not in comparison to each other or other groups.

Testing and pretest sensitization was also a threat to validity. By being exposed to the pretest, the WDAs could have been influenced to respond to the post or follow-up test in a certain way, otherwise known as the "practice effect" (Smith & Glass, 1987). Although a two-group design (where participants are exposed to the test only once) might

have potentially minimized this, this was again unrealistic and not feasible for the purpose and overall design of this study.

Sample size could also be considered a limitation. Although small sample sizes of "up to 10" are common in qualitative research and particularly in interviews, a sample size of four WDA interviews still limits the scope of the data (Creswell, 1998), although it should be noted that this study focused on local context rather than scope. Additionally, the small sample size of 13 for quantitative data could mean that one or two responses could throw off the entire dataset and make the outliers seem more important than they really are—in particular, I aimed to discuss instances of outlier data in Chapter 4.

As noted in the data summary for the mindfulness construct, response shift bias may have been the explanation for lowered levels of mindfulness scores in the quantitative data from pre to post and follow-up tests, especially in light of the high levels of mindful behavior expressed throughout the qualitative data, which are in direct contrast with low reported levels of mindfulness in quantitative data. In self-reporting instrumentation, such as the surveys in Recovery 101 and Recovery Ally training, response shift bias can occur when study participants use a different internal rating scale from one test to the next (Howard & Dailey, 1979). Internal rating scales can alter based on a new understanding of themselves or the concepts being measured, which, in this case, were levels of mindfulness. Future research may call for an examination of possible response shift bias within the instruments of measure. In cases where response shift bias is possible, Howard et al. (1979) recommend retrospective pretest-posttest designs, where the study participants answer both the posttest questions and reflect back on how they would answer the pretest questions now, after the intervention has been completed. This

retrospective design may allow researchers to gain greater perspective in evaluating self-reporting data.

Finally, the role of the researcher could have been a potential threat. By simply by being present, I may have led participants to be influenced on the way they respond in the study. A blind study could have minimized this effect, but again, for the purpose of this research, this was not realistic, but should be noted regardless. However, I aimed to minimize this threat by cofacilitating the Recovery 101 training with the CRP student employee, and by remaining transparent in my role as ASU staff and student interested in collecting data for the purpose of dissertation research.

Implications for Future Research

This study focused on two training interventions (Recovery 101 and Recovery Ally) for peer educators, called Well Devil Ambassadors, to help them build understanding and be better able to support students in recovery from addiction. While previous studies on recovery in college focused largely on the experience of students in recovery who live in a sober living residence (Laudet et al., 2014; Steiker & Alexander, 2014; Terrion, 2012), this study broadened the scope of what universities can do to better support this group of students, especially universities that do not have resources for a separate sober living residence dedicated specifically to students in recovery.

By providing support throughout the campus, universities can begin to build a culture of caring where students in recovery are recognized and validated. This support, in turn, can help students in recovery function in a caring campus environment and build resilience before they graduate and move on to a larger world. This study examined one support structure (peer educators, or students in "role model" positions) for students in

recovery that are campus-wide rather than isolated to a residence hall. Such investigation into a model of support—not based within sober living residences, but rather within the larger campus community—may provide ideas and strategies for other universities to create their own culture of caring for students in recovery, so that these students may better adapt to the world around them.

While this study was limited in sample size for the purpose of dissertation research, future directions could include applying the interventions to various groups of people within the university. Given the large student body (92,000 students in 2016) at ASU, scale was of particular importance. Train-the-trainer models, such as the model used in the Recovery Ally training, can help scale recovery support efforts by training one group, such as peer educators, to train more groups, such as student organizations and clubs. A systematic train-the-trainer model can allow for knowledge and awareness to spread to many more channels than one group of peer educators can on their own.

Dissemination of knowledge through online content is a noteworthy way to scale support efforts. The ASU Recovery Rising webpage displays written content about facts and figures regarding addiction and recovery, as well as a short video called "Recovery 101: ASU Students Bust Stereotypes," which presents students sharing their stories of how they came to recovery in college (Recovery Rising, n.d.). Much like the empathy-building portion of the Recovery 101 and Recovery Ally trainings (i.e., the narratives of the student panel and the student stories in the book *Voices of Recovery* by Laitman et al., 2003) proved to be a valuable tool in enhancing awareness and compassion, scaling this short video to the entire campus population can serve to encourage a greater understanding of students in recovery. Circulating this video can be achieved by posting

it on ASU social media sites, as well as Blackboard, the student-specific ASU webpage. Perhaps short video clips may not be as in-depth as in-person training, but these easily accessible modes of communication can open the door to encouraging a positive attitude toward those in recovery from addiction.

Greater awareness and empathy of a specific high-need population—in this case, students in recovery—can aid in creating a culture of caring within a local setting. The power of narrative was a vital element in building empathy and a positive attitude toward students in recovery. In Chapter 4, narrative was demonstrated as a key component in allowing those who are not in recovery an understanding of how and why students came to recovery in college. Hearing life stories could build the groundwork for further understanding, caring, and support for students in recovery.

The culture of a university is made up not only by its students, but also by its staff and faculty. Therefore, staff who work directly with students (counseling, health, and housing employees) may benefit from the content in this training as well. Faculty who teach have an opportunity to provide recovery awareness and support in their role as points of contact for large groups of students. Inviting peer educator student employees into faculty classrooms, whether these classrooms are face-to-face or online, can extend the reach of addiction and recovery information. Train-the-trainer models can work for both staff and faculty so they may go on to train new hires. Additionally, the Recovery 101 and Recovery Ally training can easily be transferred to other universities by inputting data points and resources specific to the institution.

While this study is not generalizable in a broad sense, generalizability of findings is not an objective of action research; however, transferability, or transferring findings

from one setting to another similar setting, is indeed a goal (Herr & Anderson, 2015). Collegiate recovery programs occur within local environments; therefore, it is key to understand the unique needs of the students along with programmatic support at individual institutions. By identifying some of the broad points of peer education for students in recovery or noting general ideas or practices that might transfer in different ways across different institutions, aspects of this intervention or research could transfer into other higher education contexts. Thus, these data can provide a view of local-level peer-to-peer trainings and programmatic practices to see how they may be applicable in university settings. For instance, the value of activities to support students' knowledge, attitudes, and behaviors about recovery is clearly beneficial, demonstrating that these constructs can improve through knowledge and new experiences or people, particularly given resources and time for training. Further, specific focuses on supporting peer educators' self-efficacy and mindfulness are promising areas for future consideration in research and practice.

To understand how individual institutions can better provide support through their local CRPs, additional research is recommended via more robust and large-scale studies to investigate student needs, peer support structures, and programmatic elements. But, learning through a greater network of small-scale studies can add value too, as a way to demonstrate the range of approaches and results across varied settings and programs, thus building up a network of research into recovery support on campuses. Additional inquiry into individual CRPs can deliver contextual data, which can serve as a guide to other university CRPs. Further examination of various CRP elements may add value to the growing literature base so local institutions can apply pertinent elements to their settings.

Recommendations for researchers whose scope includes the study of addiction and recovery can be advised to work closely and directly with those in recovery. Anecdotally, I have heard communities who collaborate with researchers use the phrase, "Nothing about us without us." This common saying suggests that populations who are participants in a study prefer to be a part of that research, from the development of foundational data to the interpretation of results. Rather than the researcher acting as an outsider looking in, they should consider how to open up dialogue by building trust with the participants. Sharing time and space, whether face-to-face or virtually through an online platform such as Skype, can serve to build trust. Building trust can lead to greater honesty in participant self-reporting. Openness of the study participants can offer robust data, which of course provides a more valuable and legitimate study.

Conclusion

The purpose of this mixed-methods research study was to create a peer-to-peer training intervention for students in recovery. Information garnered from the larger national and local context provided a background into the need for addiction recovery support, specifically for the unique needs of the college student population. My time managing the collegiate recovery program, Recovery Rising, within the situational environment, allowed for several cycles of initial research to investigate what students in recovery required from their institution. Two cycles (Cycles 0 and 1) of foundational research paved the way to create a training intervention specific to the local context, and an already-existing group of peer health educators permitted an easily accessible platform on which to assess the training. The philosophy of mindfulness and the theories of planned behavior and self-efficacy framed the design of research methodology. Mixed-

methods research provided triangulation of quantitative and qualitative analysis to offer a multifaceted view of the training interventions results. Limitations of the study were defined as having a small sample size and investigation into only one population (peer educators); in turn, future research recommendations included an exploration of different populations (e.g., faculty, staff) within various university settings.

This study into how to best support students in recovery from alcohol and other drug addiction through the training of peer health educators can provide information to other institutions who are building or managing their CRPs. While the scope of this research was institution-specific, the findings can be transferable to other universities as they seek to understand—and respond to—the unique needs of students in recovery. In my Cycle 0 research, students in recovery acknowledged their requisite for a welcoming, safe environment, noting the need for support, not just from other students in recovery, but also from the general university population. Moving from an "abstinence hostile" (Cleveland et al., 2007) environment to one that is responsive to the needs of students in recovery requires the effort of an entire institution. A small step in the progress toward this effort is to train peer educators to be responsive to the needs of students in recovery. Promising findings from Recovery 101 and Recovery Ally training indicate that peer educators gained knowledge about addiction and recovery, developed more positive attitudes toward students in recovery, enhanced mindfulness and self-efficacy, and gained skills to support their behavior intentions. Taken within the context of the larger CRP effort, these findings point to a mechanism for institutions to make a significant impact toward the goal of supporting students in recovery.

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APPENDIX A

AMERICAN COLLEGE HEALTH ASSOCIATION—NATIONAL COLLEGE HEALTH ASSESSMENT

Term	Arizona State University (*n*)	National (*N*)
Spring 2016	1,584	95,761
Spring 2015	1,937	93,034
Spring 2014	1,483	79,266
Spring 2012	1,401	90,666
Spring 2010	2,818	95,712
Spring 2008	1,689	80,121
Spring 2006	1,222	94,806
Spring 2004	738	47,202
Spring 2002	1,149	28,258

APPENDIX B

CYCLE 0 INTERVIEW QUESTIONS

Interview Questions for Students Members of the ASU-based organization, Students for Recovery

1. What is the function of the group, Students for Recovery? What is the mission and vision of this group?
2. What is the future of this group? Where will Students for Recovery be in several years?
3. What kind of preparation do you need to work effectively and serve other ASU students?
4. What are the strengths of the group?
5. What are the barriers that might prevent the group from achieving its full potential?

APPENDIX C

CYCLE 1 RECOVERY 101 SURVEY

To keep your responses anonymous, create a unique identifier known only to you. Use the first three letters of your mother's first name and the last four digits of your phone number. For example, Sar4567 would be the identifier if your mom's first name was Sarah and your phone number is (623) 555-4567. We will use your identifier to pair up your pre and posttest answers.

Your unique identifier _____ (e.g., Sar4567, see paragraph above)

1. Please list 3 words or phrases to describe a person with drug or alcohol addiction:
2. What is the difference between problem drinking and alcohol addiction?
3. What is the difference between recreational drug use and drug addiction?
4. What is a Collegiate Recovery Community/Program?

Please rate your degree of confidence by recording a number from 0 to 100 using the scale below:

0	10	20	30	40	50	60	70	80	90	100
Cannot do at all					*Moderately can do*					*Highly certain can do*

Please respond to **all** items, even if they appear to be the same:

6. I am comfortable talking to a self-identified student in recovery
7. I am able to assist a self-identified student in recovery
8. I am able to provide resources to a self-identified student in recovery
9. I am at ease having a conversation with a self-identified student in recovery
10. I am adept at supporting a self-identified student in recovery
11. I know which resources on and off-campus to suggest to a self-identified student in recovery

Posttest **ONLY**:

11. What did you learn about students in recovery?

12. What would you like to learn about students in recovery?

APPENDIX D

CYCLE 1 WORDCLOUD PRE AND POSTDESCRIPTORS OF “ALCOHOLIC” OR “ADDICT”


lonely
need
struggling
smart
strong
sick
vulnerable
dependent
trying
hard
time
needs
troubled
sick
struggling
lost
help
abandoned
unfulfilled
clever
darkness
persistence
wants
daymoment
selfconscious
strongwilled
sensitive
selffocuseddestructive
normal
looking
loving
unknowing
hopeful
afraid
nurturing
scaredmademotional
helpless
time
escape
alone
one
depressed
needs
understanding
love
disease
damaged
facing
support
hurt
cope
one
stuck
life
day
distraught
gone
depressed
overwhelmed
hurts
strong
distressed
normal
uncontrolled
others
lonely
distracted
trapped
broken
ill
overwhelmed
networks

APPENDIX E

CYCLE 1 WELL DEVIL AMBASSADOR FINAL WELL WALL PROJECT


WELL WALL
BE ALCOHOL WISE...
EVENTS!
WD WEDNESDAYS
Booze
YOU JUDGE ME FOR NOT DRINKING?
TELL ME MORE ABOUT HOW YOU NEED A SUBSTANCE TO MAKE YOUR PERSONALITY BEARABLE
Learn First Aid and CPR
Fall 2016
RECOVERY
Meet Your Las Casas
Well Devil Ambassador
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APPENDIX F

CYCLE 1 RECOVERY 101 FOLLOW-UP SURVEY

For the end of the Fall 2016 semester, given to the six interested Well Devil Ambassadors who participated in Part 2 of the training to be a Recovery Ally

Please rate your degree of confidence to complete the following tasks by recording a number from 0 to 100 using the scale below:

0	10	20	30	40	50	60	70	80	90	100
Not confident at all					*Moderately confident*					*Very confident*

Please respond to **all** items, even if they appear to be the same:

1. I am comfortable talking to a self-identified student in recovery.
2. I am able to assist a self-identified student in recovery.
3. I am able to provide resources to a self-identified student in recovery.
4. I am able to have a conversation with a self-identified student in recovery.
5. I am able to support a self-identified student in recovery.
6. I know which resources on and off-campus to suggest to a self-identified student in recovery.

    a. Did the Recovery Ally additional training influence your job as a Well Devil Ambassador? How?

    b. Was there a part of the training in specific was beneficial to you? Describe that part.

    c. Was there a part of the training in specific was not helpful to you? Describe that part.

    d. Was there anything additional you have liked to see in the training?

7. What recommendations do you have for peer educators who would like to complete this training in the future?

APPENDIX G

RECRUITMENT FORM FOR RECOVERY 101

Dear Well Devil Ambassador:

My name is Nika Gueci, and I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at Arizona State University (ASU). I am working under the direction of Dr. Danah Henriksen, a faculty member in MLFTC. We are conducting a research study on peer educator self-efficacy at Arizona State University. The purpose of this project is to better understand how peer educators view their efficacy with respect to supporting students in recovery from drug and alcohol addiction.

We are asking for your help, which will involve your participation in a pretest, a posttest and a follow-up test assessment to determine how students in the peer education organization, Well Devil Ambassadors, (a) understand collegiate recovery, (b) assess their own current efficacy as it relates to supporting students in recovery, and (c) describe the practice of mindfulness (if any) in their lives. We anticipate the pretest to take 10 minutes and the posttest to take 10 minutes. The follow-up test at the end of the semester will take 10 minutes, totaling 30 minutes over the semester.

As part of the preparation for being a Well Devil Ambassador this year, a training session will be included called Recovery 101. This training will assist you in providing support to students who are in recovery from alcohol or other drug addiction. You will also be provided with some mindfulness tools that may be beneficial for your own wellness and for your work with others as a peer educator.

Your participation in this study is voluntary. If you choose not to participate or withdraw from the study at any time, there will be no penalty whatsoever. You must be 18 years of age or older to participate.

The benefit to participation is the opportunity for you to reflect on and think more about peer-to-peer support of students in recovery from drug and alcohol addiction. Pre, post, and follow-up test responses will also inform future education and Collegiate Recovery efforts at ASU. Thus, there is potential to enhance the experiences of both peer educators and students in recovery. There are no foreseeable risks or discomforts to your participation.

The pre and posttest assessments will be identified through a unique identifier known only to you. Your responses will be anonymous. Results from this study may be used in a dissertation, reports, presentations, or publications but your name will not be used.

To protect the confidentiality of the recovering students with whom you may have worked and/or supported, please avoid using real names in any and all open-ended responses.

If you have any questions concerning the research study, please contact the research team – Dr. Danah Henriksen at danah.henriksen@asu.edu or (517) 256-2344 or Nika Gueci at XXXXX@asu.edu or (602) XXX-XXXX.

Thank you,
Nika Gueci, Doctoral Student
Danah Henriksen, Assistant Professor

Participation in pre, post, and follow-up assessments indicates consent in participation in the study. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact Danah Henriksen at (517) 256-2344 or the Chair of Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

APPENDIX H

PRE, POST, AND FOLLOW-UP SURVEY

Thank you for your participation in this questionnaire!

To keep your responses anonymous, create a unique identifier known only to you. Use the first three letters of your mother's first name and the last four digits of your phone number. For example, Sar4567 would be the identifier if your mom's first name was Sarah and your phone number is (623) 555-4567. We will use your identifier to pair up your pre and posttest answers.

Your unique identifier _____ (e.g., Sar4567, see paragraph above)

Knowledge			
Indicate your level of agreement with the following statements.	**True**	**False**	**Don't Know**
1. If a student tells me that they are having problems due to alcohol or drug use, I know that they are an alcoholic or addict.	□	□	□
2. 40% of ASU students choose not to drink alcohol.	□	□	□
3. Recovery Allies are people who might not be in recovery themselves, but they support students in recovery	□	□	□
4. Addiction is a chronic, relapsing brain disease.	□	□	□

Attitude				
Indicate your level of agreement with the following statements.	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
5. I have the ability/right to diagnose another student with alcoholism or addiction	□	□	□	□
6. In reality, most ASU students don't drink too much.	□	□	□	□
7. I consider myself a "recovery ally."	□	□	□	□
8. People who are addicted to a substance can stop drinking or using drugs whenever they want.	□	□	□	□

Behavior				
How likely would you be to:	**Very Unlikely**	**Unlikely**	**Likely**	**Very Likely**
9. Attempt to convince another student who clearly has a problem, that they do have an alcohol or drug problem	□	□	□	□
10. Tell students in recovery that there are actually many nondrinkers at ASU	□	□	□	□
11. Support a student in recovery by listening to them without judgment	□	□	□	□
12. Let someone know that if they think they are addicted to a substance, that have to try hard not to use it—otherwise, they don't *really* want to stop.	□	□	□	□

Self-Efficacy				
Indicate your level of agreement with the following statement.	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
13. I am confident that I will achieve the "recovery ally" goals I set for myself.	□	□	□	□
14. Once I've decided to accomplish something that is important to me, I keep trying to accomplish it, even if it is harder that I thought. 15. I believe my hard work of supporting other students pays off. 16. My ability as a peer educator grows with effort and learning.	□	□	□	□

Short-Answer Questions
Please answer the following questions using as much detail as you can.
17. For posttest only. Do you plan to be a Recovery Ally? If so, how will you support students in recovery?
18. For end-of-semester follow-up: Do you consider yourself a Recovery Ally? If no, why not? If so, why?

Mindfulness				
Indicate your level of agreement with the following statements.	**Strongly Disagree**	**Disagree**	**Agree**	**Strongly Agree**
19. I find it difficult to stay focused on what's happening in the present.	□	□	□	□
20. I forget a person's name, or similar new pieces of information, almost as soon as I've been told it for the first time.	□	□	□	□
21. It seems I am "running on automatic," without much awareness of what I'm doing.	□	□	□	□
22. I do jobs or tasks automatically, without being aware of what I'm doing.	□	□	□	□

APPENDIX I

RECRUITMENT FORM FOR RECOVERY ALLY

Dear Well Devil Ambassador:

My name is Nika Gueci and I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at Arizona State University (ASU). I am working under the direction of Dr. Danah Henriksen, a faculty member in MLFTC. We are conducting a research study on peer educator self-efficacy at Arizona State University. The purpose of this project is to better understand how peer educators view their efficacy with respect to supporting students in recovery from drug and alcohol addiction.

We are asking for your help, which will involve your participation in an interview to determine how students in the peer education organization, Well Devil Ambassadors, (a) understand collegiate recovery, (b) assess their own current efficacy as it relates to supporting students in recovery, and (c) describe the practice of mindfulness (if any) in their lives. We anticipate the interview to take approximately 60 minutes total.

As a Well Devil Ambassador, you can self-select to participate in a semester-long training (2 hours per month, totaling 6 hours of training) called Recovery Ally. This training will assist you in providing support to students who are in recovery from alcohol or other drug addiction. You will also be provided with some mindfulness tools that may be beneficial for your own wellness and for your work with others as a peer educator.

In this Recovery Ally training, you will be trained to develop additional skills for working with students in recovery. An interview lasting approximately 60 minutes will be conducted at the end of this follow-up training. This interview will be audio-recorded.

Your participation in this study is voluntary. If you choose not to participate or withdraw from the study at any time, there will be no penalty whatsoever. You must be 18 years of age or older to participate.

The benefit to participation is the opportunity for you to reflect on and think more about peer-to-peer support of students in recovery from drug and alcohol addiction. Interview responses will also inform future education and collegiate recovery efforts at ASU. Thus, there is potential to enhance the experiences of both peer educators and students in recovery. There are no foreseeable risks or discomforts to your participation.

The interviews will be identified through a unique identifier known only to you. Your responses will be anonymous. Results from this study may be used in a dissertation, reports, presentations, or publications but your name will not be used.

To protect the confidentiality of the recovering students with whom you may have worked and/or supported, please avoid using real names in any and all interview responses.

If you have any questions concerning the research study, please contact the research team: Dr. Danah Henriksen at danah.henriksen@asu.edu or (517) 256-2344 or Nika Gueci at XXXXX@asu.edu or (602) XXX-XXXX.

Thank you,

Nika Gueci, Doctoral Student
Danah Henriksen, Assistant Professor

Participation in the qualitative interview indicates consent in participation in the study. If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact Danah Henriksen at (517) 256-2344 or the Chair of Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

APPENDIX J

RECOVERY ALLY SEMI-STRUCTURED INTERVIEW QUESTIONS

Open-Ended Warm-Up Questions

1. Tell me a little about your experience as a peer educator this semester. *(Possible probe: Tell me about the students you worked with, some of the projects you worked on)*
    a. You signed up to work with ASU's collegiate recovery program (Recovery Rising) this semester. What inspired you to work on recovery-related programs?

Knowledge

2. The first session of the Recovery Ally training this semester involved a train-the-trainer version of Recovery 101. Tell me what you learned from this training. (*Possible probes: Can you say more about that? Can you share an example of that?)*

3. The second session of the Recovery Ally training involved a book discussion. Tell me what you learned after reading the book *Voices of Recovery from the Campus*.
    a. Do you think that your knowledge of students in recovery has shifted in any way after reading and discussing this book?

Attitude

4. Think back to the beginning of the semester, before the initial Recovery 101 training. What were your views on addiction recovery before the training?

5. Has working with students in recovery (going through the training, listening to student panels, and working on recovery-related events) impacted your initial views? Why or why not? *(Possible probe: Can you say more about if and how you feel differently toward this issue? Can you share an example of how your attitude toward addiction recovery has shifted?)*

Behaviors

6. Have you encountered/worked with/engaged in conversation with a student in recovery? Tell me about the situation. If so, were you able to support them? How?
    a. If you haven't yet worked with a student in recovery, tell me about how you think you would engage with them. What would you try to do to best support them?

Self-Efficacy

7. Tell me about your final project. What did you do? How did it go?

8. How did you feel as you were planning the project? Executing the project?

9. Do you feel your confidence in working to support students in recovery has changed from the beginning of the semester? If yes, do you believe that mindfulness played a role? If no, what are some resources that we could have given you to support you further?

Mindfulness

10. During the Recovery 101 and the Recovery Ally trainings, we incorporated some mindful meditation practices and tips to be mindful throughout your day. Has this impacted you in any way? How?
    a. Did you feel differently after doing the mindful meditation during the sessions?
    b. Have you practiced mindfulness or meditation on your own?
    c. How likely would you be to share the benefits of this practice with others? Why?

APPENDIX K

INSTRUMENTATION CROSS-REFERENCE

Research Questions		**Interview Protocol Items**
Question 1	How and to what extent does Recovery 101 training inform peer educator's knowledge about students in recovery?	Questions 2, 3
Question 2	How and to what extent does Recovery 101 training inform peer educator's attitudes about students in recovery?	Question 4, 5
Question 3	How and to what extent does peer educator knowledge and attitudes toward students in recovery influence their behavior intentions toward students in recovery?	Questions 6, 6a
Question 4	How and to what extent does Recovery 101 and Recovery Ally training inform peer educator's self-efficacy toward supporting students in recovery?	Questions 7, 8, 9
Question 5	How and to what extent does the practice of mindfulness throughout the Recovery 101 and Recovery Ally training affect peer educators?	Question 10, 10a, 10b, 10c
Note. Questions 1 and 1a on the interview protocol were "warm-up" questions, designed to start the conversation on teaching and build discussion rapport. They do not necessarily correspond to research questions noted above.		

APPENDIX L

IRB APPROVAL

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Danah Henriksen
Division of Educational Leadership and Innovation - West
-
Danah.Henriksen@asu.edu

Dear Danah Henriksen:

On 9/27/2017 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Peer Educator Self-Efficacy in Supporting Students in Recovery from Alcohol and Other Drug Addiction at ASU
Investigator:	Danah Henriksen
IRB ID:	STUDY00006898
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• IRB Protocol, Category: IRB Protocol; • Interview protocol, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Quantitative Instrument, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Recovery 101 Recruit Consent, Category: Consent Form; • Recovery Ally Recruit Consent, Category: Consent Form; • CITI report, Category: Other (to reflect anything not captured above);

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 9/27/2017.